WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Monday, February 06, 2006

Hide?	Set Name	Query	Hit Count
	DB=USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L6	acetylgalactosaminyl transferase and elegans	2
☐	L5	acetylgalactosaminyl transferase and elegans	2
	DB=PGPB; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L4	acetylgalactosaminyl transferase and elegans	9
☐	L3	acetylgalactosaminyl transferase same elegans	1
☐	L2	L1	0
	DB=USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L1	acetylgalactosaminyl transferase same elegans	0

END OF SEARCH HISTORY

Hit List

First Hit | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 9 of 9 returned.

☐ 1. Document ID: US 20050287639 A1

L4: Entry 1 of 9 File: PGPB Dec 29, 2005

PGPUB-DOCUMENT-NUMBER: 20050287639
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050287639 A1

TITLE: Methods of incorporating amino acid analogs into proteins

PUBLICATION-DATE: December 29, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Kwon, Inchan	Pasadena	CA	US
Tirrell, David	Pasadena	CA	US

US-CL-CURRENT: 435/69.1; 435/252.33, 435/254.1, 435/320.1, 530/350, 536/23.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

☐ 2. Document ID: US 20050037477 A1

L4: Entry 2 of 9 File: PGPB Feb 17, 2005

PGPUB-DOCUMENT-NUMBER: 20050037477
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050037477 A1

TITLE: Core 1 beta3-galactosyltransferase specific molecular chaperones, nucleic acids, and methods of use thereof

PUBLICATION-DATE: February 17, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Cummings, Richard D.	Edmond	OK	US
Ju, Tongzhong	Edmond	OK	US

US-CL-CURRENT: 435/226; 435/320.1, 435/325, 435/69.1, 536/23.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

☐ 3. Document ID: US 20040265807 A1

L4: Entry 3 of 9 File: PGPB Dec 30, 2004

PGPUB-DOCUMENT-NUMBER: 20040265807
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040265807 A1

TITLE: Enzymes

PUBLICATION-DATE: December 30, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sanjanwala, Madhusudan M	Los Altos	CA	US
Lu, Yan	Mountain View	CA	US
Lee, Ernestine A	Castro Valley	CA	US
Hafalia, April J A	Daly City	CA	US
Warren, Bridget A	San Marcos	CA	US
Baughn, Mariah R	Los Angeles	CA	US
Tang, Y Tom	San Jose	CA	US
Yue, Henry	Sunnyvale	CA	US
Yao, Monique G	Mountain View	CA	US
Lee, Sally	San Jose	CA	US
Thornton, Michael B	Oakland	CA	US
Chawla, Narinder K	Union City	CA	US
Xu, Yuming	Mountain View	CA	US
Tran, Uyen K	San Jose	CA	US
Lal, Preeti G	Santa Clara	CA	US
Lu, Dyung Aina M	San Jose	CA	US
Swarnakar, Anita	San Francisco	CA	US
Ring, Huijun Z	Foster City	CA	US
Jones, Karen A	Bollington		GB

US-CL-CURRENT: 435/6; 435/183, 435/320.1, 435/325, 435/69.1, 536/23.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. D

☐ 4. Document ID: US 20040248256 A1

L4: Entry 4 of 9 File: PGPB Dec 9, 2004

PGPUB-DOCUMENT-NUMBER: 20040248256
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040248256 A1

TITLE: Secreted proteins and polynucleotides encoding them

PUBLICATION-DATE: December 9, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Jacobs, Kenneth	Newton	MA	US
McCoy, John M.	Reading	MA	US
LaVallie, Edward R.	Harvard	MA	US
Collins-Racie, Lisa	Acton	MA	US
Merberg, David	Acton	MA	US
Evans, Cheryl	Germantown	MD	US
Treacy, Maurice	Dublin	MA	IE
Agostino, Michael J.	Andover	MA	US
Steininger, Robert J. II	Cambridge	MA	US
Bowman, Michael R.	Canton	MA	US
DiBlasio-Smith, Elizabeth	Tyngsboro	MA	US
Widom, Angela	Acton		US

US-CL-CURRENT: 435/69.1; 435/320.1, 435/325, 530/350, 536/23.5

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

---

☐ 5. Document ID: US 20040171003 A1

L4: Entry 5 of 9 File: PGPB Sep 2, 2004

PGPUB-DOCUMENT-NUMBER: 20040171003
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040171003 A1

TITLE: Cancer-associated genes

PUBLICATION-DATE: September 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Yoshikawa, Yoshie	Kyoto		JP
Okamoto, Sachiko	Kyoto		JP
Oura, Tomonori	Kyoto		JP
Mineno, Junichi	Kyoto		JP
Asada, Kiyozo	Shiga		JP
Inoue, Hiroshi	Oita		JP
Mori, Masaki	Oitama		JP

US-CL-CURRENT: 435/6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

---

☐ 6. Document ID: US 20040115777 A1

L4: Entry 6 of 9 File: PGPB Jun 17, 2004

PGPUB-DOCUMENT-NUMBER: 20040115777
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040115777 A1

TITLE: Identification of protein interactions using in vivo post-translationally modified fusion proteins

PUBLICATION-DATE: June 17, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Budworth, Paul	San Diego	CA	US
Wang, Xun	San Diego	CA	US

US-CL-CURRENT: 435/69.7; 435/320.1, 435/325, 435/7.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 7. Document ID: US 20040101930 A1

L4: Entry 7 of 9 File: PGPB May 27, 2004

PGPUB-DOCUMENT-NUMBER: 20040101930
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040101930 A1

TITLE: Secreted proteins

PUBLICATION-DATE: May 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Jackson, Jennifer L.	Santa Cruz	CA	US
Tang, Y. Tom	San Jose	CA	US
Yue, Henry	Sunnyvale	CA	US
Elliott, Vicki S	San Jose	CA	US
Tribouley, Catherine M	San Francisco	CA	US
Lee, Ernestine A	Castro Valley	CA	US
Ramkumar, Jayalaxmi	Fremont	CA	US
Lal, Preeti G	Santa Clara	CA	US
Xu, Yuming	Mountain View	CA	US
Warren, Bridget A	Encinitas	CA	US
Hafalia, April J.A.	Santa Clara	CA	US
Baughn, Mariah R	San Leandro	CA	US
Azimzai, Yalda	Oakland	CA	US
Batra, Sajeev	Oakland	CA	US
Burford, Neil	Durham	CT	US
Yao, Monique G	Carmel	IN	US

Nguyen, Danniel B	San Jose	CA	US
Lu, Dyung Aina M	SanJose	CA	US
Chawla, Narinder K	Union City	CA	US
Gandhi, Ameena R	San Francisco	CA	US
Au-Young, Janice K	Brisbane	CA	US
Arvizu, Chandra S	San Jose	CA	US

US-CL-CURRENT: 435/69.1; 435/320.1, 435/325, 530/350, 536/23.5

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. D

☐ 8. Document ID: US 20040086995 A1

L4: Entry 8 of 9 File: PGPB May 6, 2004

PGPUB-DOCUMENT-NUMBER: 20040086995
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040086995 A1

TITLE: Beta1, 4-N-Acetylgalactosaminyltransferases, nucleic acids and methods of use thereof

PUBLICATION-DATE: May 6, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Cummings, Richard D.	Edmond	OK	US
Kawar, Ziad S.	Oklahoma City	OK	US

US-CL-CURRENT: 435/193; 435/320.1, 435/325, 435/69.1, 536/23.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. D

☐ 9. Document ID: US 20040081980 A1

L4: Entry 9 of 9 File: PGPB Apr 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040081980
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040081980 A1

TITLE: Drug metabolizing enzymes

PUBLICATION-DATE: April 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sanjanwala, Madhusudan M.	Los Altos	CA	US
Yao, Monique G.	Carmel	IN	US
Au-Young, Janice K.	Brisbane	CA	US

Baughn, Mariah R.	San Leandro	CA	US
Arvizu, Chandra S.	Menlo Park	CA	US
Ring, Huijun Z.	Los Altos	CA	US
Lee, Ernestine A.	Albany	CA	US
Ding, Li	Palo Alto	CA	US
Hafalia, April J.A.	Santa Clara	CA	US
Tang, Y. Tom	San Jose	CA	US
Yue, Henry	Sunnyvale	CA	US
Tribouley, Catherine M.	San Francisco	CA	US
Lu, Dyung Aina M.	San Jose	CA	US
Lal, Preeti G.	Santa Clara	CA	US
Warren, Bridget A.	Cupertino	CA	US
Yang, Junming	San Jose	CA	US
Chawla, Narinder K.	San Leandro	CA	US
Nguyen, Danniel B.	San Jose	CA	US
Gandhi, Ameena R.	San Francisco	CA	US
Lu, Yan	Palo Alto	CA	US
Ison, Craig H.	San Jose	CA	US

US-CL-CURRENT: 435/6; 435/183, 435/320.1, 435/325, 435/69.1, 530/388.26, 536/23.2

Terms	Documents
acetylgalactosaminyl transferase and elegans	9

Hit List

First Hit | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 6261788 B1

Using default format because multiple data bases are involved.

L6: Entry 1 of 2 File: USPT Jul 17, 2001

US-PAT-NO: 6261788
DOCUMENT-IDENTIFIER: US 6261788 B1

TITLE: Diagnostic assays for infectious parasitic helminths

DATE-ISSUED: July 17, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cummings; Richard D.	Edmond	OK		
Nyame; Anthony Kwame	Edmond	OK		

US-CL-CURRENT: 435/7.22; 424/9.1, 435/7.1, 435/975, 536/55

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. De

☐ 2. Document ID: US 5871990 A

L6: Entry 2 of 2 File: USPT Feb 16, 1999

US-PAT-NO: 5871990
DOCUMENT-IDENTIFIER: US 5871990 A

TITLE: UDP-N-acetyl-.alpha.-D-galactosamine: polypeptide N-acetylgalactosaminyltransferase, gAlnAc-T3

DATE-ISSUED: February 16, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Clausen; Henrik	Holte			DK
Bennett; Eric Paul	Lyngby			DK

US-CL-CURRENT: 435/193; 435/252.3, 435/320.1, 435/6, 435/69.1, 530/350, 536/23.2, 536/24.3, 536/24.31

ABSTRACT:

A novel gene defining a novel enzyme in the UDP-N-acetyl-.alpha.-D-galactosamine: polypeptide N-acetylgalactosaminyltransferase family, termed GalNAc-T3, with unique enzymatic properties is disclosed. The enzymatic activity of GalNAc-T3 is shown to be distinct from that of two previously identified enzymes of this gene family. The invention discloses isolated DNA molecules and DNA constructs encoding GalNAc-T3 and derivatives thereof by way of amino acid deletion, substitution or insertion exhibiting GalNAc-T3 activity, as well as cloning and expression vectors including such DNA, cells transfected with the vectors, and recombinant methods for providing GalNAc-T3. The enzyme GalNAc-T3 and GalNAc-T3-active derivatives thereof are disclosed, in particular soluble derivatives comprising the catalytically active domain of GalNAc-T3. Further, the invention discloses methods of obtaining N-acetylgalactosamine glycosylated peptides or proteins by use of an enzymically active GalNAc-T3 protein or fusion protein thereof or by using cells stably transfected with a vector including DNA encoding an enzymatically active GalNAc-T3 protein as an expression system for recombinant production of such glycopeptides or glycoproteins. Also a method for the production of a vaccine by modifying the O-glycosylation pattern of an eukaryotic cell, and a method for the identification of DNA sequence variations in the GalNAc-T3 gene by isolating DNA from a patient, amplifying GalNAc-T3-coding exons by PCR, and detecting the presence of DNA sequence variation, are disclosed.

28 Claims, 13 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 11

Terms	Documents
acetylgalactosaminyl transferase and elegans	2

STN Search **10/661,430**

```
FILE 'HOME' ENTERED AT 16:24:14 ON 06 FEB 2006

=> file .nash
=> s acetylgalactosaminyl transferase and elegans
L1            0 FILE MEDLINE
L2            1 FILE CAPLUS
L3            1 FILE SCISEARCH
L4            0 FILE LIFESCI
L5            1 FILE BIOSIS
L6            0 FILE EMBASE

TOTAL FOR ALL FILES
L7            3 ACETYLGALACTOSAMINYL TRANSFERASE AND ELEGANS

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8            3 DUP REM L7 (0 DUPLICATES REMOVED)

=> d ibib abs

L8   ANSWER 1 OF 3  SCISEARCH  COPYRIGHT (c) 2006 The Thomson Corporation  on
     STN
ACCESSION NUMBER:    2004:694970  SCISEARCH Full-text
THE GENUINE ARTICLE: 841XI
TITLE:               Role of peptide sequence and neighboring residue
                     glycosylation on the substrate specificity of the uridine
                     5 '-diphosphate-alpha-N-acetylgalactosamine: Polypeptide
                     N-acetylgalactosaminyl transferases T1
                     and T2: Kinetic modeling of the porcine and canine
                     submaxillary gland mucin tandem repeats
AUTHOR:              Gerken T A (Reprint); Tep C; Rarick J
CORPORATE SOURCE:    Case Western Reserve Univ, Sch Med, Cyst Fibrosis Fdn,
                     Dept Pediat & Biochem, Cleveland, OH 44106 USA (Reprint)
                     txg2@cwru.edu
COUNTRY OF AUTHOR:   USA
SOURCE:              BIOCHEMISTRY, (3 AUG 2004) Vol. 43, No. 30, pp. 9888-9900.
                     ISSN: 0006-2960.
PUBLISHER:           AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036
                     USA.
DOCUMENT TYPE:       Article; Journal
LANGUAGE:            English
REFERENCE COUNT:     72
ENTRY DATE:          Entered STN: 27 Aug 2004
                     Last Updated on STN: 27 Aug 2004
                    *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*
```


AB A large family of uridine 5'-diphosphate (UDP)-(alpha-N- acetylgalactosamine (GalNAc): polypeptide N-acetylgalactosaminyl transferases (ppGalNAc Ts) initiates mucin-type O-glycan biosynthesis at serine and threonine. The peptide substrate specificities of individual family members are not well characterized or understood, leaving an inability to rationally predict or comprehend sites of O-glycosylation. Recently, a kinetic modeling approach demonstrated neighboring residue glycosylation as a major factor modulating the O-glycosylation of the porcine submaxillary gland mucin 81 residue tandem repeat by ppGalNAc T1 and T2 [Gerken et al. (2002) J. Biol. Chemical 277, 49850-49862]. To confirm the general applicability of this model and its parameters, the ppGalNAc T1 and T2 glycosylation kinetics of the 80+ residue tandem repeat from the canine submaxillary gland mucin was obtained and characterized. To reproduce the glycosylation patterns of both mucins (comprising 50+ serine/threonine residues), specific effects of neighboring peptide sequence, in addition to the previously described effects of neighboring residue glycosylation, were required of the model. Differences in specificity of the two transferases were defined by their sensitivities to neighboring proline and nonglycosylated hydroxyamino acid residues, from which a ppGalNAc T2 motif was identified. Importantly, the model can approximate the previously reported ppGalNAc T2 glycosylation kinetics of the IgA1 hinge domain peptide [Iwasaki, et al. (2003) J. Biol. Chemical 278, 5613-5621], further validating both the approach and the ppGalNAc T2 positional weighting parameters. The characterization of ppGalNAc transferase specificity by this approach may prove useful for the search for isoform-specific substrates, the creation of isoform-specific inhibitors, and the prediction of mucin-type O-glycosylation sites.

=> d 2-3 ibib abs

L8 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:322214 BIOSIS Full-text
DOCUMENT NUMBER: PREV200510111996
TITLE: Approaches for characterizing ppGalNAc transferase peptide substrate specificity.
AUTHOR(S): Gerken, Thomas A. [Reprint Author]; Rarick, Jason
CORPORATE SOURCE: Case Western Reserve Univ, Sch Med, Dept Pediat, BRB, Cleveland, OH 44106 USA
SOURCE: Glycobiology, (NOV 2004) Vol. 14, No. 11, pp. 1190. Meeting Info.: Joint Meeting of the Society-for-Glycobiology/Japanese-Society-for-Carbohydrate-Research. Honolulu, HI, USA. November 17 -20, 2004. Soc Gylcobiol; Japanese Soc Carbohydrate Res.
ISSN: 0959-6658.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Aug 2005
Last Updated on STN: 25 Aug 2005

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:987146 CAPLUS Full-text
DOCUMENT NUMBER: 124:78122
TITLE: Cloning and sequence homology of a rat UDP-GalNAc:polypeptide N-acetylgalactosaminyltransfera se
AUTHOR(S): Hagen, Fred K.; Gregoire, Christine A.; Tabak, Lawrence A.
CORPORATE SOURCE: Dep. Dental Res. and Biochemistry, Univ. Rochester, Rochester, NY, 14642, USA
SOURCE: Glycoconjugate Journal (1995), 12(6), 901-9
CODEN: GLJOEW; ISSN: 0282-0080
PUBLISHER: Chapman & Hall
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase (polypeptide GalNAc transferase) cDNA was amplified from rat sublingual, submandibular and parotid glands, brain, skeletal muscle, and liver, using the polymerase chain reaction (PCR) and sequences derived from bovine polypeptide GalNAc transferase-Type 1 (polypeptide GalNAc transferase-T1). The transcripts encoding the rat sublingual gland and bovine enzymes were 91% identical in nucleotide sequence, except in their 5' and 3' untranslated regions. The enzymes encoded by the rat and bovine cDNAs were 559 amino acids in length and were virtually identical (98% amino acid sequence identity and 99.5% homologous overall). Northern blot anal. indicates that the polypeptide GalNAc transferase-T1 transcripts are expressed in many tissues but as widely differing levels. Although the amino acid sequence of polypeptide GalNAc transferase-T1 is conserved among mammals, the pattern of tissue expression varies between rats and humans. For example, the steady-state level of polypeptide GalNAc transferase-T1 transcript is quite low in lung relative to other rat tissues, whereas high expression of this transcript is detected in human lung. Therefore, we surmise that isoforms of polypeptide GalNAc transferase must exist and that isoforms are expressed in a tissue-dependent fashion. Searches of the GenBank database have revealed homologous sequences for several isoforms derived from several human tissues. In addition, hypothetical proteins from C. elegans also display strong homol.; evidence suggests six ancestral isoforms of polypeptide GalNAc transferases may exist in C. elegans.

=> s acetylgalactosaminyl transferase
TOTAL FOR ALL FILES
L15 546 ACETYLGALACTOSAMINYL TRANSFERASE

=> s l15 and (gene or dna or cdna or nucleic acid or clon?)
TOTAL FOR ALL FILES
L22 197 L15 AND (GENE OR DNA OR CDNA OR NUCLEIC ACID OR CLON?)

=> s l22 not 2003-2006/py
TOTAL FOR ALL FILES
L29 151 L22 NOT 2003-2006/PY

=> dup rem l29
PROCESSING COMPLETED FOR L29
L30 67 DUP REM L29 (84 DUPLICATES REMOVED)

=> d ibib abs 1-69

L30 ANSWER 1 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:289142 SCISEARCH Full-text
THE GENUINE ARTICLE: 536TJ
TITLE: Expression of UDP-N-Acetyl-alpha-D-Galactosamine-Polypeptide GaINAc n-acetylgalactosaminyl transferase-3 in relation to differentiation and prognosis in patients with colorectal carcinoma
AUTHOR: Shibao K; Izumi H; Nakayama Y; Ohta R; Nagata N; Nomoto M; Matsuo K; Yamada Y; Kitazato K; Itoh H; Kohno K (Reprint)
CORPORATE SOURCE: Univ Occupat & Environm Hlth, Sch Med, Dept Biol Mol, Yahatanishi Ku, 1-1 Iseigaoka, Kitakyushu, Fukuoka 8078555, Japan (Reprint); Univ Occupat & Environm Hlth, Sch Med, Dept Biol Mol, Yahatanishi Ku, Kitakyushu, Fukuoka 8078555, Japan; Univ Occupat & Environm Hlth, Sch Med, Dept Surg, Kitakyushu, Fukuoka 8078555, Japan; Taiho Pharmaceut Co Ltd, Hanno Res Ctr, Hanno, Saitama, Japan
COUNTRY OF AUTHOR: Japan
SOURCE: CANCER, (1 APR 2002) Vol. 94, No. 7, pp. 1939-1946. ISSN: 0008-543X.
PUBLISHER: JOHN WILEY & SONS INC, 111 RIVER ST, HOBOKEN, NJ 07030 USA
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 26
ENTRY DATE: Entered STN: 19 Apr 2002
Last Updated on STN: 19 Apr 2002
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB BACKGROUND. Tumor development usually is accompanied by alterations of O-glycosylation. Initial glycosylation of mucin-type, O-linked proteins is catalyzed by one of the UDP-GaINAc-polypeptideN-acetyl- galactosaminyl transferases, such as GalNAc-T3, which is expressed in adenocarcinoma cells. The authors investigated whether such expression influenced tumor differentiation or prognosis in patients with colorectal carcinoma.
METHODS. The expression of GalNAc-T3 was evaluated immunohistochemically in 106 paraffin embedded samples from surgically resected colorectal carcinomas and was related to patient and tumor characteristics. Western blot analysis was performed on seven samples of frozen tissue.
RESULTS. Strong tumor expression of GalNAc-T3 predicted 5-year survival in patients with colorectal carcinoma (67.2% vs. 43.6% for weak expression; P = 0.017). GalNAc-T3 expression was not associated with age, gender, tumor size, tumor location, or disease stage but was related to histologic differentiation (P = 0.049) and depth of invasion (P = 0.031). Univariate analysis showed that strong GalNAc-T3 expression significantly enhanced the likelihood of survival. Multivariate Cox survival analysis identified enzyme expression as an independent prognostic factor that was second only to TNM stage.
CONCLUSIONS. GalNAc-T3 expression is a novel and useful indicator of tumor differentiation, disease aggressiveness, and prognosis in patients with colorectal carcinoma.

L30 ANSWER 2 OF 67 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2002470503 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12232759
TITLE: N-acetylgalactosaminyl transferase-3 is a potential new marker for non-small cell lung cancers.
AUTHOR: Dosaka-Akita H; Kinoshita I; Yamazaki K; Izumi H; Itoh T; Katoh H; Nishimura M; Matsuo K; Yamada Y; Kohno K
CORPORATE SOURCE: Department of Medical Oncology, Hokkaido University Graduate School of Medicine, North 15, West 7, Kita-ku, Sapporo, 060-8638, Japan.. hdakita@med.hokudai.ac.jp
SOURCE: British journal of cancer, (2002 Sep 23) 87 (7) 751-5. Journal code: 0370635. ISSN: 0007-0920.
PUB. COUNTRY: Scotland: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200211
ENTRY DATE: Entered STN: 20020917
Last Updated on STN: 20021213
Entered Medline: 20021107

AB N-acetylgalactosaminyl transferase-3 (GalNAc-T3) is an enzyme involved in the initial glycosylation of mucin-type O-linked proteins. In the present study, we used immunohistochemistry to examine GalNAc-T3 expression in 215 surgically resected non-small cell lung cancers. We analysed the biological and clinical importance of GalNAc-T3 expression, especially with regard to its potential as a prognostic factor. We found that normal bronchial epithelial cells, bronchial gland cells, and alveolar pneumocytes showed cytoplasmic immunostaining for GalNAc-T3. Low expression of GalNAc-T3, observed in 93 of 215 tumours (43.4%), was found more frequently in tumours from smokers than those from nonsmokers (P=0.001), in squamous cell carcinomas than nonsquamous cell carcinomas (P<0.0001), and in moderately and poorly differentiated tumours than well differentiated tumours (P=0.0002). Multivariate logistic regression analysis showed that an association of low GalNAc-T3 expression with squamous cell carcinomas was the only one significant relationship of GalNAc-T3 expression with various factors (P<0.0001). Moreover, tumours losing GalNAc-T3 expression had a significantly higher Ki-67 labelling index than tumours retaining GalNAc-T3 expression (P=0.0003). Patients with low GalNAc-T3 expression survived a significantly shorter time than patients with high GalNAc-T3 expression in 103 pStage I non-small cell lung cancers (5-year survival rates, 58% and 78%, respectively; P=0.02 by log-rank test) as well as in 61 pStage I nonsquamous cell carcinomas (5-year survival rates, 63% and 85%, respectively; P=0.03). Low GalNAc-T3 expression was an unfavourable prognostic factor in pStage I non-small cell lung cancers (hazards ratio, 2.04; P=0.03), and in pStage I nonsquamous cell carcinomas (hazards ratio, 2.70; P=0.03). These results suggest that GalNAc-T3 is a new marker of non-small cell lung cancers with specificity for histology and prognosis.

L30 ANSWER 3 OF 67 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2003006849 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12512856
TITLE: Biosynthesis of chondroitin/dermatan sulfate.
AUTHOR: Silbert Jeremiah E; Sugumaran Geetha
CORPORATE SOURCE: Department of Veterans Affairs Medical Center, Bedford, Massachusetts 01730, USA.. jesilbert@aol.com
CONTRACT NUMBER: AR-41649 (NIAMS)
SOURCE: IUBMB life, (2002 Oct) 54 (4) 177-86. Ref: 182
Journal code: 100888706. ISSN: 1521-6543.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200306
ENTRY DATE: Entered STN: 20030107
Last Updated on STN: 20030621
Entered Medline: 20030620

AB Chondroitin sulfate and dermatan sulfate are synthesized as galactosaminoglycan polymers containing N-acetylgalactosmine alternating with glucuronic acid. The sugar residues are sulfated to varying degrees and positions depending upon the tissue sources and varying conditions of formation. Epimerization of any of the glucuronic acid residues to iduronic acid at the polymer level constitutes the formation of dermatan sulfate. Chondroitin/dermatan glycosaminoglycans are covalently attached by a common tetrasaccharide sequence to the serine residues of core proteins while they are adherent to the inner surface of endoplasmic reticulum/Golgi vesicles. Addition of the first sugar residue, xylose, to core proteins begins in the endoplasmic reticulum, followed by the addition of two galactose residues by two distinct glycosyl transferases in the early cis/medial regions of the Golgi. The linkage tetrasaccharide is completed in the medial/trans Golgi by the addition of the first glucuronic acid residue, followed by transfer of N-acetylgalactosamine to initiate the formation of a galactosaminoglycan rather than a glucosaminoglycan. This specific N-acetylgalactosaminyl transferase is different from the chondroitin synthase involved in generation of the repeating disaccharide units to form the chondroitin polymer. Sulfation of the chondroitin polymer by specific sulfotransferases occurs as the polymer is being formed. All the enzymes in the pathway for synthesis have been cloned, with the exception of the glucuronyl to iduronyl epimerase involved in the formation of dermatan residues.

L30 ANSWER 4 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 3

ACCESSION NUMBER: 2002:419183 SCISEARCH Full-text
THE GENUINE ARTICLE: 550KH
TITLE: Absorption of anti-blood group A antibodies on P-selectin glycoprotein ligand-1/immunoglobulin chimeras carrying blood group A determinants: core saccharide chain specificity of the Se and H gene encoded alpha 1,2 fucosyltransferases in different host cells
AUTHOR: Lofling J C (Reprint); Hauzenberger E; Holgersson J
CORPORATE SOURCE: Huddinge Univ Hosp AB, Karolinska Inst, Div Clin Immunol, IMP1, S-14186 Stockholm, Sweden (Reprint)
COUNTRY OF AUTHOR: Sweden
SOURCE: GLYCOBIOLOGY, (MAR 2002) Vol. 12, No. 3, pp. 173-182. ISSN: 0959-6658.
PUBLISHER: OXFORD UNIV PRESS INC, JOURNALS DEPT, 2001 EVANS RD, CARY, NC 27513 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 58
ENTRY DATE: Entered STN: 31 May 2002
Last Updated on STN: 31 May 2002

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB To specifically eliminate recipient anti-blood group ABO antibodies prior to ABO-incompatible organ or bone marrow transplantation, an efficient absorber of ABO antibodies has been developed in which blood group determinants may be carried at high density and by different core saccharide chains on a mucin-type protein backbone. The absorber was made by transfecting different host cells with cDNAs encoding a P-selectin glycoprotein ligand-1/mouse immunoglobulin G(2b) chimera (PSGL-1/mIgG(2b)), the H- or Se-gene encoded alpha1,2-fucosyltransferases (FUT1 or FUT2) and the blood group A gene encoded 0,3 N-acetylgalactosaminyl- transferase (alpha1,3 GalNACT). Western blot analysis of affinity-purified recombinant PSGL-1/mIgG(2b) revealed that different precursor chains were produced in 293T, COS-7m6, and Chinese hamster ovary (CHO)-K1 host cells coexpressing FUT1 or FUT2. FUT1 directed expression of H type 2 structures mainly, whereas FUT2 preferentially made H type 3 structures. None of the host cells expressing either FUT1 or FUT2 supported expression of H type 1 structures. Furthermore, the highest A epitope density was on PSGL-1/mIgG2(2b) made in CHO-K1 cells coexpressing FUT2 and the alpha1,3 GalNACT. This PSGL-1/mIgG(2b) was used for absorption of anti-blood group A antibodies in human blood group O serum. At least 80 times less A trisaccharides on PSGL-1/mIgG(2b) in comparison to A trisaccharides covalently linked to macroporous glass beads were needed for the same level of antibody absorption. In conclusion, PSGL-1/mIgG(2b), if substituted with A epitopes, was shown to be an efficient absorber of anti-blood group A antibodies and a suitable model protein for studies on protein glycosylation.

L30 ANSWER 5 OF 67 MEDLINE on STN

ACCESSION NUMBER: 2002182246 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 11914601
TITLE: Overexpression of beta 1,4N-acetylgalactosaminyl-transferase mRNA as a molecular marker for various types of cancers.
AUTHOR: Sugita Yurika; Fujiwara Yoshiyuki; Hoon Dave S B; Miyamoto Atsushi; Sakon Masato; Kuo Christine T; Monden Morito
CORPORATE SOURCE: Department of Surgery and Clinical Oncology, Graduate School of Medicine, Osaka University, Osaka, Japan.
SOURCE: Oncology, (2002) 62 (2) 149-56.
Journal code: 0135054. ISSN: 0030-2414.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20020401
Last Updated on STN: 20020503
Entered Medline: 20020502

AB OBJECTIVE: To determine GalNAcT mRNA expression in human carcinoma cell lines and primary tumor tissues. Assessment of the potential use of GalNAcT mRNA as a molecular marker for detection of metastatic cancer cells in the peripheral blood of patients with hepatocellular carcinoma. METHODS/RESULTS: We investigated GalNAcT mRNA expression in

various human cancer cell lines and primary cancer tissues using RT-PCR assay for GalNAcT mRNA. The expression of GalNAcT mRNA was detected in 25 of 26 cancer cell lines tested and in the majority of primary tumors from different organs: 8 of 10 colon cancers, 9 of 9 breast cancers, 11 of 12 esophageal cancers, 14 of 14 gastric cancers, 4 of 18 pancreatic cancers, 6 of 12 biliary tract cancers, 17 of 18 hepatocellular carcinomas and 13 of 14 lung cancers. Semi-quantitative analysis with duplex RT-PCR showed that the amount of the GalNAcT mRNA was enhanced in cancer tissues as compared to the surrounding cancer-free tissues. Blood specimens of 5 of 14 patients with hepatocellular carcinoma were positive for GalNAcT mRNA, all of whom developed recurrent disease in less than 24 months. Peripheral blood samples of 30 normal subjects were negative for GalNAcT mRNA. CONCLUSION: Our results suggest that the RT-PCR assay for GalNAcT mRNA could be a potentially useful molecular marker for detecting cancer dissemination in blood circulation of patients with malignancy. Copyright 2002 S. Karger AG, Basel

L30 ANSWER 6 OF 67 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2002245091 EMBASE Full-text
TITLE: Overexpression and biochemical characterization of β-1,3-N-acetylgalactosaminyltransferase LgtD from Haemophilus influenzae strain Rd.
AUTHOR: Shao J.; Zhang J.; Kowal P.; Lu Y.; Wang P.G.
CORPORATE SOURCE: P.G. Wang, Department of Chemistry, Wayne State University, Detroit, MI 48202, United States. pwang@chem.wayne.edu
SOURCE: Biochemical and Biophysical Research Communications, (2002) Vol. 295, No. 1, pp. 1-8. .
Refs: 40
ISSN: 0006-291X CODEN: BBRCA
PUBLISHER IDENT.: S 0006-291X(02)00615-0
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20020725
Last Updated on STN: 20020725

AB The lipopolysaccharide of capsule deficient Haemophilus influenzae strain Rd contains an N-acetylgalactosamine residue attached to the terminal globotriose moiety in the Hex5 glycoform. Genome analysis identified an open reading frame HI1578, referred to as lgtD, whose amino acid sequence shows significant level of similarity to a number of bacterial glycosyltransferases involved in lipopolysaccharide biosynthesis. To investigate its function, overexpression and biochemical characterization were performed. Most of the protein was obtained in a highly soluble and active form. By using standard glycosyltransferase assay and HPLC, we show that LgtD is an N-acetylgalactosaminyltransferase with high donor substrate specificity and globotriose is a highly preferred acceptor substrate for the enzyme. The K(m) for UDP-GalNAc and globotriose are 58 μM and 8.6 mM, respectively. The amino acid sequence of the enzyme shows the conserved features of family II glycosyltransferases. This is the first N-acetylgalactosaminyl-transferase identified from H. influenzae, which shows potential application in large-scale synthesis of globo-series oligosaccharides. .COPYRGT. 2002 Elsevier Science (USA). All rights reserved.

L30 ANSWER 7 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:556384 SCISEARCH Full-text
THE GENUINE ARTICLE: 451CL
TITLE: Glycopeptide N-acetylgalactosaminyltransferase specificities for O-glycosylated sites on MUC5AC mucin motif peptides
AUTHOR: Tetaert D (Reprint); Ten Hagen K G; Richet C; Boersma A; Gagnon J; Degand P
CORPORATE SOURCE: INSERM, U377, Pl Verdun, F-59045 Lille, France (Reprint); INSERM, U377, F-59045 Lille, France; Univ Rochester, Ctr Oral Biol, Aab Inst Biomed Sci, Rochester, NY 14642 USA; Univ Grenoble 1, CNRS, Inst Biol Struct, JP, EBEL, CEA, F-38027 Grenoble, France
COUNTRY OF AUTHOR: France; USA
SOURCE: BIOCHEMICAL JOURNAL, (1 JUL 2001) Vol. 357, Part 1, pp. 313-320.
ISSN: 0264-6021.

PUBLISHER: PORTLAND PRESS, 59 PORTLAND PLACE, LONDON W1N 3AJ, ENGLAND

DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 37
ENTRY DATE: Entered STN: 27 Jul 2001
Last Updated on STN: 27 Jul 2001
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The recombinant proteins of the two novel UDP-N-acetyl-galactosamine (GalNAc) glycopeptide, N-acetylgalactosaminyl- transferases (designated gpGaNTase-T7 and gpGaNTase-T9) were assayed with O-glycosylated products obtained from the prior action of the ubiquitous transferases (GaNTase-T1 and GaNTase-T2) towards MUC5AC mucin motif peptides (GTT PSPVPTTSTTSAP and peptides with single amino acid substitutions, GTTPSAVPTTSTTSVP and GTTPSPVPTTSITSVP. that are a reflection of mucin molecule polymorphism). gpGaNTase-T9 is known to be expressed differentially and more abundantly than gpGaNTase-T7 in some tissues; the results of in vitro glycosylation also indicates a difference in acceptor substrate specificities between the gpGaNTase isoforms, With the use of capillary electrophoresis, MS and Edman degradation, our study suggests that, in the O-glycosylation of mucin-type proteins, approach and recognition signalling by gpGaNTase-T7 and gpGaNTase-T9 depend largely on the peptide's primary structure (for example the presence of multiple clusters of hydroxy amino acids and the number of GalNAc residues attached to the peptide backbone). O-glycosylation in terms of sites of attachment seems to be less random than previously described and, if sequential reactions are ordered throughout the Golgi slack, the complete O-glycosylation of the mucin molecules seems to be finely tuned to respond to specific damage to, or attack on, epithelia.

L30 ANSWER 8 OF 67 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2000127862 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 10660542
TITLE: Biosynthesis of ganglioside mimics in Campylobacter jejuni OH4384. Identification of the glycosyltransferase genes, enzymatic synthesis of model compounds, and characterization of nanomole amounts by 600-mhz (1)h and (13)c NMR analysis.
AUTHOR: Gilbert M; Brisson J R; Karwaski M F; Michniewicz J; Cunningham A M; Wu Y; Young N M; Wakarchuk W W
CORPORATE SOURCE: Institute for Biological Sciences, National Research Council of Canada, Ottawa, Ontario K1A 0R6, Canada.
SOURCE: Journal of biological chemistry, (2000 Feb 11) 275 (6) 3896-906.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF130466; GENBANK-AF130984; GENBANK-AF167345
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 20000327
Last Updated on STN: 20000327
Entered Medline: 20000316

AB We have applied two strategies for the cloning of four genes responsible for the biosynthesis of the GT1a ganglioside mimic in the lipooligosaccharide (LOS) of a bacterial pathogen, Campylobacter jejuni OH4384, which has been associated with Guillain-Barre syndrome. We first cloned a gene encoding an alpha-2, 3-sialyltransferase (cst-I) using an activity screening strategy. We then used nucleotide sequence information from the recently completed sequence from C. jejuni NCTC 11168 to amplify a region involved in LOS biosynthesis from C. jejuni OH4384. The LOS biosynthesis locus from C. jejuni OH4384 is 11.47 kilobase pairs and encodes 13 partial or complete open reading frames, while the corresponding locus in C. jejuni NCTC 11168 spans 13.49 kilobase pairs and contains 15 open reading frames, indicating a different organization between these two strains. Potential glycosyltransferase genes were cloned individually, expressed in Escherichia coli, and assayed using synthetic fluorescent oligosaccharides as acceptors. We identified genes encoding a beta-1, 4-N- acetylgalactosaminyl-transferase (cgtA), a beta-1, 3-galactosyltransferase (cgtB), and a bifunctional sialyltransferase (cst-II), which transfers sialic acid to O-3 of galactose and to O-8 of a sialic acid that is linked alpha-2,3- to a galactose. The linkage specificity of each identified glycosyltransferase was confirmed by NMR analysis at 600 MHz on nanomole amounts of model compounds synthesized in vitro. Using a gradient inverse broadband nano-NMR probe, sequence information could be obtained by detection of (3)J(C,H) correlations across the glycosidic

bond. The role of cgtA and cst-II in the synthesis of the GT1a mimic in C. jejuni OH4384 were confirmed by comparing their sequence and activity with corresponding homologues in two related C. jejuni strains that express shorter ganglioside mimics in their LOS.

L30 ANSWER 9 OF 67 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2001321582 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 11159923
TITLE: Diverse spatial expression patterns of UDP-GalNAc:polypeptide N-acetylgalactosaminyl-transferase family member mRNAs during mouse development.
AUTHOR: Kingsley P D; Hagen K G; Maltby K M; Zara J; Tabak L A
CORPORATE SOURCE: Center for Oral Biology, Aab Institute of Biomedical Sciences, and Department of Pediatrics, University of Rochester, Rochester, NY 14642, USA.
CONTRACT NUMBER: DE08108 (NIDCR)
SOURCE: Glycobiology, (2000 Dec) 10 (12) 1317-23.
Journal code: 9104124. ISSN: 0959-6658.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200106
ENTRY DATE: Entered STN: 20010611
Last Updated on STN: 20010611
Entered Medline: 20010607

AB Cell migration and adhesion during embryonic development are complex processes which likely involve interactions among cell-surface carbohydrates. While considerable work has implicated proteoglycans in a wide range of developmental events, only limited attention has been directed towards understanding the 7role(s) played by the related class of mucin-type O-glycans. The initial step of mammalian mucin-type O-glycosylation is catalyzed by a family of UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferases (ppGaNTases). The spatial expression patterns of the messenger RNAs of seven ppGaNTase family members were investigated from gastrulation through organogenesis stages of mouse development. The seven glycosyltransferases were expressed in unique patterns during embryogenesis. ppGaNTase-T1, -T2, -T4, and -T9 were expressed more ubiquitously than ppGaNTase-T3, -T5, and -T7. Organ systems with discrete accumulation patterns of ppGaNTase family members include the gastrointestinal tract (intestine, liver, stomach, submandibular gland), nervous system (brain, eye), lung, bone, yolk sac, and developing craniofacial region. The pattern in the craniofacial region included differential expression by family members in developing mandible, teeth, tongue and discrete regions of the brain including the pons and migratory, differentiating neurons. Additionally, ppGaNTase-T5 accumulates in a subset of mesenchymal cells at the ventral-most portions of the E12.5 maxilla and mandible underlying the dental lamina. The unique spatiotemporal expression of the different ppGaNTase family members during development suggests unique roles for each of these gene products.

L30 ANSWER 10 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 2000:195217 CAPLUS Full-text
DOCUMENT NUMBER: 133:145545
TITLE: Molecular detection of metastatic pancreatic carcinoma cells using a multimarker reverse transcriptase-polymerase chain reaction assay
AUTHOR(S): Bilchik, Anton; Miyashiro, Miki; Kelley, Mark; Kuo, Christine; Fujiwara, Yoshiyuki; Nakamori, Shogi; Monden, Morito; Hoon, Dave S. B.
CORPORATE SOURCE: Department of Molecular Oncology, Saint John's Health Center, John Wayne Cancer Institute, Santa Monica, CA, 90404, USA
SOURCE: Cancer (New York) (2000), 88(5), 1037-1044
CODEN: CANCAR; ISSN: 0008-543X
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB BACKGROUND. The diagnosis of pancreatic carcinoma is often associated with a poor prognosis, because most patients already have advanced disease. A highly sensitive assay to detect the progression of pancreatic carcinoma would be of significant clin. utility. The authors developed multiple tumor mRNA markers for reverse transcriptase-polymerase chain reaction (RT-PCR) to detect metastatic tumor cells in the blood and tissue of

patients with American Joint Committee on Cancer (AJCC) Stage II/III or IV pancreatic carcinoma. METHODS. An RT-PCR plus Southern blot assay was used to detect mRNA of tumor markers in blood and tissues. MRNA expression of the tumor progression markers MET (hepatocyte growth factor receptor gene c-met), GalNAc-T (β1,4- N- acetylgalactosaminyl-transferase), and β-hCG (β-human chorionic gonadotropin) was evaluated in 9 pancreatic carcinoma cell lines, 13 tumor biopsy specimens, 5 nonmalignant pancreatic tissue specimens, and blood from 33 pancreatic carcinoma patients and 32 healthy donors. RESULTS. The detection limit of the assay was 1 pg, 10 pg, and 10 pg for MET, GalNAc-T, and β-hCG mRNA expression, resp. The pancreatic carcinoma cell lines expressed all three mRNA markers. Of blood specimens from 17 patients with AJCC Stage IV pancreatic carcinoma, 82%, 65%, and 76% were MET, GalNAc-T, and β-hCG mRNA pos., resp. Of blood specimens from 16 patients with AJCC Stage II/III disease, 88% were pos. for at least 1 mRNA marker. CONCLUSIONS. A multiple mol. marker assay was developed to detect cancer cells in blood and tissue from patients with different stages of pancreatic carcinoma. The detection of cancer cells in the blood may be used as a marker of pancreatic tumor progression and may be useful in monitoring response to therapy.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 11 OF 67 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:182547 BIOSIS Full-text
DOCUMENT NUMBER: PREV200100182547
TITLE: Isolation of cDNA clones related to the spawning in hard clam Meretrix lusoria.
AUTHOR(S): Matsumoto, Toshie [Reprint author]; Mizuno, Tomomi
CORPORATE SOURCE: Natl. Res. Ins. Aquacul., Mie, 516-0193, Japan
SOURCE: Comparative Biochemistry and Physiology Part A Molecular and Integrative Physiology, (November, 2000) Vol. 127A, No. 3, pp. 382. print.
Meeting Info.: 11th Annual Meeting of the Japanese Society for Comparative Physiology and Biochemistry. Yamaguchi, Japan. August 03-05, 2000. Japanese Society for Comparative Physiology and Biochemistry.
ISSN: 1095-6433.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 11 Apr 2001
Last Updated on STN: 19 Feb 2002

L30 ANSWER 12 OF 67 MEDLINE on STN DUPLICATE 7

ACCESSION NUMBER: 2000090241 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 10626815
TITLE: Structural basis for the regulation of UDP-N-acetyl-alpha-D-galactosamine: polypeptide N-acetylgalactosaminyl transferase-3 gene expression in adenocarcinoma cells.
AUTHOR: Nomoto M; Izumi H; Ise T; Kato K; Takano H; Nagatani G; Shibao K; Ohta R; Imamura T; Kuwano M; Matsuo K; Yamada Y; Itoh H; Kohno K
CORPORATE SOURCE: Department of Molecular Biology, University of Occupational and Environmental Health, Japan, School of Medicine, Kitakyushu.
SOURCE: Cancer research, (1999 Dec 15) 59 (24) 6214-22.
Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200001
ENTRY DATE: Entered STN: 20000204
Last Updated on STN: 20000204
Entered Medline: 20000124

AB The UDP-N-acetyl-alpha-D-galactosamine: polypeptide N- acetylgalactosaminyl transferase-3 (Gal NAc-T3) gene, a member of the Gal NAc transferase gene family, is expressed in a tissue-specific manner. To elucidate the function of this gene, we have focused on the molecular mechanism underlying regulation of gene expression. We have cloned Gal NAc-T3 cDNA and used it to show that Gal NAc-T3 mRNA is expressed in tumor cell lines derived from secretory epithelial tissue adenocarcinomas but not in cell lines derived from

bladder and epidermoid carcinomas. Using a polyclonal antibody to Gal NAc-T3, we observed protein expression in adenocarcinoma but not non-adenocarcinoma cell lines, and in breast carcinoma cells but not in normal breast tissue. We used Gal NAc-T3 cDNA to isolate three overlapping genomic clones containing the 5'-portion of the human Gal NAc-T3 gene, and we sequenced 1.6 kb around the first exon. A transient expression assay using the luciferase gene showed that promoter activity was much higher in MCF-7 cells than in KB cells. In vivo footprint experiments showed significant protection of a distal GC box, an NRF-1 site, and an AP-2 site in MCF-7 cells. A novel stem and loop structure extending from nucleotide -103 to nucleotide -165 and contiguous to these transcription factor binding sites seemed to be functional in regulating Gal NAc-T3 gene transcription, and a KMnO4 footprint experiment showed that this stem and loop structure could be formed in vivo. We also observed dimethyl sulfate hypersensitive sites in the untranslated region around nucleotide +50 in MCF-7 but not in KB cells. These findings indicate that Gal NAc-T3 gene expression is regulated by multiple systems, including transcription factor binding sites and a stem-and-loop structure, and that this regulation is restricted to cell lines derived from epithelial gland adenocarcinomas but not cells derived from nonsecretory epithelial tissue carcinomas. In addition, our immunohistochemical results suggest that our anti-Gal NAc-T3 antibody may be useful for diagnostic purposes in the early stages of breast cancer.

L30 ANSWER 13 OF 67 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 2000005717 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 10537325
TITLE: Gangliosides influence angiogenesis in an experimental mouse brain tumor.
AUTHOR: Manfredi M G; Lim S; Claffey K P; Seyfried T N
CORPORATE SOURCE: Department of Biology, Boston College, Chestnut Hill, Massachusetts 02467, USA.
CONTRACT NUMBER: CA64436 (NCI)
NSCA33640 (NINDS)
SOURCE: Cancer research, (1999 Oct 15) 59 (20) 5392-7.
Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199911
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991110

AB Gangliosides are sialated glycosphingolipids present on the plasma membranes of all vertebrate cells. Tumors shed gangliosides into the extracellular microenvironment, which may influence tumor-host cell interactions. We have investigated the role of gangliosides on the growth and angiogenesis of the EPEN experimental mouse brain tumor. EPEN cells express only ganglioside G(M3), and the solid tumors formed in vivo are sparsely vascularized with extensive necrosis. We stably transfected the EPEN cells with the cDNA for N-acetylgalactosaminyl transferase, a key enzyme for the synthesis of complex gangliosides. In addition to G(M3), the transfected cell line (EPEN-GNT) expressed complex gangliosides G(M2), G(M1), and G(D1a). The EPEN-GNT tumor was more densely vascularized with less necrosis and grew more rapidly than the nontransfected EPEN or mock-transfected (EPEN-V) control tumors. Also, VEGF gene expression was higher in the EPEN-GNT tumor than in the control tumors. The synthesis of complex gangliosides in the EPEN-GNT tumor cells also stimulated vascularization in an in vivo Matrigel assay for angiogenesis. These results indicate that the ratio of G(M3) to complex gangliosides can influence the growth and angiogenic properties of the EPEN experimental brain tumor and are consistent with previous findings in other systems. We conclude that gangliosides may be important modulators of brain tumor angiogenesis.

L30 ANSWER 14 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1999:801260 SCISEARCH Full-text
THE GENUINE ARTICLE: 240DF
TITLE: Characterization of mammalian UDP-GalNAc : glucuronide alpha 1-4-N-acetylgalactosaminyltransferase
AUTHOR: Miura Y; Ding Y L; Manzi A; Hindsgaul O; Freeze H H (Reprint)
CORPORATE SOURCE: Burnham Inst, 10901 N Torrey Pines Rd, La Jolla, CA 92037 USA (Reprint); Burnham Inst, La Jolla, CA 92037 USA; Nextran Inc, San Diego, CA 92121 USA

COUNTRY OF AUTHOR: USA
SOURCE: GLYCOBIOLOGY, (OCT 1999) Vol. 9, No. 10, pp. 1053-1060.
ISSN: 0959-6658.
PUBLISHER: OXFORD UNIV PRESS INC, JOURNALS DEPT, 2001 EVANS RD, CARY, NC 27513 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 18
ENTRY DATE: Entered STN: 1999
Last Updated on STN: 1999
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We previously reported that cultured cells incubated with beta-xylosides synthesized alpha-GalNAc-capped GAG-related xylosides, GalNAc alpha GlcA beta Gal beta Gal beta Xyl beta-R and GalNAc alpha GlcA beta GalNAc beta GlcA beta Gal beta Gal beta Xyl beta-R, where R is 4-methylumbelliferyl or p-nitrophenyl (Manzi ct at, 1995; Miura and Freeze, 1998), In this study, we characterized an alpha-N-acetylgalactosaminyltransferase (alpha-GalNAc-T) that probably adds the alpha-GalNAc residue to the above xylosides, Microsomes from several animal cells and mouse brain contained the enzyme activity which requires divalent cations, and has a relatively broad pH optimal range around neutral. The apparent K-m values were in the submillimolar range for the accepters tested, and 19 mu M for UDP-GalNAc. H-1-MMR analysis of the GlcA-beta-MU acceptor product showed the GalNAc residue is transferred in alpha 1,4-linkage to the glucuronide, which is consistent with previous results reported on alpha-GalNAc-capped Xyl-MU (Manzi ct al,, 1995), Various artificial glucuronides were tested as accepters to assess the influence of the:he aglycone, Glucuronides with a bicyclic aromatic ring, such as 4-methylumbelliferyl beta-D-glucuronide (GlcA-beta-MU) and alpha-naphthyl beta-D-glucuronide, were the best accepters. Interestingly, a synthetic acceptor that resembles the HNK-1 carbohydrate epitope but lacking the sulfate group, GlcA beta 1,3Gal beta 1,4GlcNAc beta-O-octyl (Delta SHNK-C-8), was a better acceptor for alpha-GalNAc-T than the glycosaminoglycan-protein linkage region tetrasaccharyl xyloside, GlcA beta 1,3Gal beta 1,3Gal beta 1,4Xyl beta-MU. GlcA-beta-MU and Delta SHNK-C-8 competed for the alpha-GalNAc-T activity, suggesting that the same activity catalyzes the transfer of the GalNAc residue to both accepters. Taken together, the results show that the alpha-GalNAc-T described here is not restricted to GAG-type oligosaccharide accepters, but rather is a UDP-GalNAc:glucuronide alpha 1-4-N- acetylgalactosaminyl-transferase.

L30 ANSWER 15 OF 67 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 1998165749 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 9499384
TITLE: Isoform-specific O-glycosylation by murine UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase-T3, in vivo.
AUTHOR: Nehrke K; Hagen F K; Tabak L A
CORPORATE SOURCE: Department of Dental Research, School of Dentistry, University of Rochester, Rochester, NY 14648, USA.
CONTRACT NUMBER: DE-08108 (NIDCR)
T32 DE-07202 (NIDCR)
SOURCE: Glycobiology, (1998 Apr) 8 (4) 367-71.
Journal code: 9104124. ISSN: 0959-6658.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; AIDS
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980611
Last Updated on STN: 20000303
Entered Medline: 19980602

AB Multiple isoforms of UDP-GalNAc:polypeptide N-acetylgalactosaminyl - transferase (ppGaNTase) have been cloned and expressed from a variety of organisms. In general, these isoforms display different patterns of tissue-specific expression, but exhibit overlapping substrate specificities, in vitro . A peptide substrate, derived from the sequence of the V3 loop of the HIV gp120 protein (HIV peptide), has previously been shown to be glycosylated in vitro exclusively by the ppGaNTase-T3 (Bennett et al. , 1996). To determine if this isoform-specificity is maintained in vivo , we have examined the glycosylation of this substrate when it is expressed as a reporter peptide (rHIV) in a cell background (COS7 cells) which lacks detectable levels of the ppGaNTase-T3. Glycosylation of rHIV was greatly increased by coexpression of a recombinant ppGaNTase-T3. Overexpression of ppGaNTase-T1 yielded only partial glycosylation of the reporter. We

have also determined that the introduction of a proline residue at the +3 position flanking the potential glycosylation site eliminated ppGaNTase-T3 selectivity toward rHIV observed both in vivo and in vitro .

L30 ANSWER 16 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 10
ACCESSION NUMBER: 1999:47912 CAPLUS Full-text
DOCUMENT NUMBER: 130:262889
TITLE: Assignment of GALGT encoding β-1,4N-acetylgalactosaminyl-transferase (GalNAc-T) and KIF5A encoding neuronal kinesin (D12S1889) to human chromosome band 12q13 by assignment to ICI YAC 26EG10 and in situ hybridization
AUTHOR(S): Hamlin, P. J.; Jones, P. F.; Leek, J. P.; Bransfield, K.; Lench, N. J.; Aldersley, M. A.; Howdle, P. D.; Markham, A. F.; Robinson, P. A.
CORPORATE SOURCE: Molecular Medicine Unit, University of Leeds, Leeds, UK
SOURCE: Cytogenetics and Cell Genetics (1998), 82(3-4), 267-268
CODEN: CGCGBR; ISSN: 0301-0171
PUBLISHER: S. Karger AG
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two genes, GALGT encoding β-1,4N- acetylgalactosaminyl-transferase and KIF5A encoding neuronal kinesin (D12S1889), were mapped to human chromosome band 12q13. GALGT and KIF5A map to the same 200-kb yeast artificial chromosome as GLI and DDIT3 genes.
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 17 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:504475 SCISEARCH Full-text
THE GENUINE ARTICLE: XH446
TITLE: Discovery of the shortest sequence motif for high level mucin-type O-glycosylation
AUTHOR: Yoshida A (Reprint); Suzuki M; Ikenaga H; Takeuchi M
CORPORATE SOURCE: KIRIN BREWERY CO LTD, CENT LABS KEY TECHNOL, GLYCOTECHNOL GRP, KANAZAWA KU, YOKOHAMA, KANAGAWA 236, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (4 JUL 1997) Vol. 272, No. 27, pp. 16884-16888.
ISSN: 0021-9258.
PUBLISHER: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 31
ENTRY DATE: Entered STN: 1997
Last Updated on STN: 1997
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The consensus primary amino acid sequence for mucin-type O-glycosylation sites Has not beers identified, To determine the shortest motif sequence required for high level mucin-type O-glycosylation, we prepared more than 100 synthetic peptides and assayed in vitro O-GalNAc transfer to serine or threonine in these peptides using a bovine colostrum UDP-N-acetylgalactosamine: polypeptide N-acetylgalactosaminyl transferase (O-GalNAcT). We chose the sequence PDAASAAP from human erythropoietin (hEPO) for further systematic substitutions because it accepted GalNAc and was a fairly simple sequence consisting only of four kinds of amino acids, Several substitutions showed that threonine is similar to 40-fold better than serine as the glycosylated amino acid and a proline at position +3 on the C-terminal side is very important, go define the effect of proline residues around the glycosylation site, we analyzed a series of peptides containing one to three proline residues in;a parent peptide AAATAAA. The results clearly indicated that pralines at positions +1 and +3 had a positive effect. The O-GalNAc transfer level of AAATPAP was increased approximately 90-fold from AAATAAA. The deletion of amino acids from the N-terminal side of the glycosylation site suggested that five amino acids from position -1 to +3 were especially important for glycosylation. Moreover, the influence of all 20 amino acids at positions -1, +2, and +4 was analyzed. Uncharged amino acids were preferred at position -1, and small or positively

charged amino acids were preferred at position +2. No preference was observed at position +4. We propose a mucin-type O-glycosylation motif, XTPXP, which may be suitable as a signal for protein O-glycosylation. The features observed in this study also appear to he very useful for prediction of mucin-type O-glycosylation sites in glycoproteins.

L30 ANSWER 18 OF 67 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 97262049 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 9108463
TITLE: Ganglioside biosynthetic gene expression in experimental mouse brain tumors.
AUTHOR: Ecsedy J A; Manfredi M G; Yohe H C; Seyfried T N
CORPORATE SOURCE: Department of Biology, Boston College, Chestnut Hill, Massachusetts 02167-3811, USA.
CONTRACT NUMBER: NS 24826 (NINDS)
SOURCE: Cancer research, (1997 Apr 15) 57 (8) 1580-3.
Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199705
ENTRY DATE: Entered STN: 19970507
Last Updated on STN: 19970507
Entered Medline: 19970501

AB The genes for cytidine monophospho-N-acetylneuraminic acid hydroxylase (NeuAc-H) and beta-1,4-N-acetylgalactosaminyl transferase (GalNAc-T) were examined using reverse transcription-PCR in two experimental mouse brain tumors, EPEN and CT-2A. NeuAc-H is required for the synthesis of gangliosides containing N-glycolylneuraminic acid, whereas GalNAc-T is required for the synthesis of ganglioside GM2. The genes were analyzed in solid tumors grown in vivo and in tumor cells grown in vitro. NeuGc-containing gangliosides are abundant in cells of the mouse immune system, including macrophages, but are undetectable in normal mouse brain. GM2 is expressed in both neural and nonneural mouse cells and tissues. The EPEN tumor cells synthesize only ganglioside GM3, whereas the CT-2A tumor cells synthesize GM3, GM2, GM1, and GD1a. NeuAc-H gene expression was detected in both solid tumors grown in vivo but was undetectable in either tumor cell line. The presence or absence of NeuAc-H gene expression in the tumor tissues and cells correlates with the presence or absence, respectively, of NeuGc-containing gangliosides. Differences in GalNAc-T gene expression between the solid tumors and the cultured tumor cells correlate with the expression of ganglioside GM2. The findings suggest that the differences in ganglioside biosynthetic gene expression between brain tumors grown in vivo and in vitro are associated with the presence or absence, respectively, of tumor-infiltrating host cells.

L30 ANSWER 19 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 12
ACCESSION NUMBER: 1997:912377 SCISEARCH Full-text
THE GENUINE ARTICLE: YK767
TITLE: Charge distribution of flanking amine acids inhibits O-glycosylation of several single-site acceptors in vivo
AUTHOR: Nehrke K (Reprint); TenHagen K G; Hagen F K; Tabak L A
CORPORATE SOURCE: UNIV ROCHESTER, SCH MED & DENT, DEPT DENT RES, ROCHESTER, NY 14642; UNIV ROCHESTER, SCH MED & DENT, DEPT BIOCHEM, ROCHESTER, NY 14642
COUNTRY OF AUTHOR: USA
SOURCE: GLYCOBIOLOGY, (DEC 1997) Vol. 7, No. 8, pp. 1053-1060.
ISSN: 0959-6658.
PUBLISHER: OXFORD UNIV PRESS, GREAT CLARENDON ST, OXFORD, ENGLAND OX2 6DP.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 32
ENTRY DATE: Entered STN: 1997
Last Updated on STN: 1997
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB From surveys of known O-glycosylation sites and in vitro glycosylation assays with synthetic peptide accepters, it appears that the presence of charged amino acids near serine/threonine residues reduces the likelihood of O-glycosylation by UDP-

GalNAc polypeptide:N- acetylgalactosaminyl-transferases (ppGaNTases). Previously, we demonstrated that the in vivo O-glycosylation of a sequence derived from a known glycosylation site of human von Willebrand factor (PHMAQVTVGPGL) was markedly reduced when charged residues were substituted at position -1 and +3 relative to the single threonine, In contrast, acidic residues at positions -2, +1, and +2 had no effect (Nehrke et al., 1996), suggesting that charge distribution but not charge density was important. To determine whether the charge distribution effect on O-glycosylation is limited to a specific sequence context or restricted to unique isoforms of ppGaNTase, we have analyzed the in vivo O-glycosylation of six secreted recombinant reporter proteins in three different cell backgrounds, The differential presence of known ppGaNTase transcripts was determined in each cell type by Northern blot analysis, Each reporter, which contains a single site of O-glycosylation, was O-glycosylated in a cell-background-specific manner; digestion with O-glycanase and alpha-N-acetylgalactosaminidase following mild acid hydrolysis suggested that simple type II core structures were acquired, However, in COS7 cells, one reporter peptide acquired glycosaminoglycans in preference to mucin-type O-glycans, Regardless of cell background or the reporter examined, the substitution of glutamic acid residues at positions -1 and +3 markedly diminished the level of mucin-type O-glycosylation, Charge distribution would appear, therefore, to play a more general role in determining the extent to which solitary O-glycosylation sites are modified.

L30 ANSWER 20 OF 67 MEDLINE on STN DUPLICATE 13
ACCESSION NUMBER: 1998057339 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 9396632
TITLE: Chinese hamster ovary cells lacking GM1 and GD1a synthesize gangliosides upon transfection with human GM2 synthase.
AUTHOR: Rosales Fritz V M; Daniotti J L; Maccioni H J
CORPORATE SOURCE: Centro de Investigaciones en Quimica Biologica de Cordoba, Departamento de Quimica Biologica, Facultad de Ciencias Quimicas, Universidad Nacional de Cordoba, Argentina.
SOURCE: Biochimica et biophysica acta, (1997 Nov 1) 1354 (2) 153-8. Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199801
ENTRY DATE: Entered STN: 19980122
Last Updated on STN: 19980122
Entered Medline: 19980105
AB GM3-positive Chinese hamster ovary cells (CHO-K1 cells) lack the ability to synthesize GM2 and the complex gangliosides GM1 and GD1a from [3H]Gal added to the culture medium. However, they acquire the ability to synthesize GM2 and to synthesize and immunoexpress complex gangliosides upon transient transfection with a cDNA encoding the human GM3:N-acetylgalactosaminyl transferase (GM2 synthase). The activities of endogenous GM1- and GD1a-synthases in the parental cell line and in cells transfected with the plasmid with or without the GM2 synthase cDNA were essentially identical and comparable in terms of specific activity with the endogenous GM3 synthase. Results indicate that glycosyltransferases acting on GM2 to produce GM1 and GD1a are constitutively present in CHO-K1 cells, and that the expression of their activities depend on the supply of the acceptor GM2. In addition, these results lend support to the notion that GM2 synthase is a key regulatory enzyme influencing the balance between simple and complex gangliosides.

L30 ANSWER 21 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 14
ACCESSION NUMBER: 1997:865728 SCISEARCH Full-text
THE GENUINE ARTICLE: YG698
TITLE: Chinese hamster ovary cells lacking GM1 and GD1a synthesize gangliosides upon transfection with human GM2 synthase
AUTHOR: Fritz V M R (Reprint); Daniotti J L; Maccioni H J F
CORPORATE SOURCE: UNIV NACL CORDOBA, FAC CIENCIAS QUIM, DEPT QUIM BIOL, CONICET, CTR INVEST QUIM BIOL CORDOBA, RA-5000 CORDOBA, ARGENTINA
COUNTRY OF AUTHOR: ARGENTINA
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA-GENE STRUCTURE AND EXPRESSION, (1 NOV 1997) Vol. 1354, No. 2, pp. 153-158. ISSN: 0167-4781.

PUBLISHER: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 22
ENTRY DATE: Entered STN: 1997
Last Updated on STN: 1997
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB GM3-positive Chinese hamster ovary cells (CHO-K cells) lack the ability to synthesize GM2 and the complex gangliosides GM1 and GD1a from [H-3]Gal added to the culture medium. However, they acquire the ability to synthesize GM2 and to synthesize and immunoexpress complex gangliosides upon transient transfection with a cDNA encoding the human GM3:N-acetylgalactosaminyl transferase (GM2 synthase). The activities of endogenous GM1- and GD1a-synthases in the parental cell line and in cells transfected with the plasmid with or without the GM2 synthase cDNA were essentially identical and comparable in terms of specific activity with the endogenous GM3 synthase. Results indicate that glycosyltransferases acting on GM2 to produce GM1 and GD1a are constitutively present in CHO-K1 cells, and that the expression of their activities depend on the supply of the acceptor GM2. In addition, these results lend support to the notion that GM2 synthase is a key regulatory enzyme influencing the balance between simple and complex gangliosides. (C) 1997 Elsevier Science B.V.

L30 ANSWER 22 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:586347 CAPLUS Full-text
DOCUMENT NUMBER: 127:275993
TITLE: O-glycosylation and cellular differentiation in a subpopulation of mucin-secreting HT-29 cell line
AUTHOR(S): Hennebicq-Reig, Sylviane; Tetaert, Daniel; Soudan, Benoit; Kim, Isabelle; Huet, Guillemette; Briand, Gilbert; Richet, Colette; Demeyer, Dominique; Degand, Pierre
CORPORATE SOURCE: Biologie et Physiopathologie des Cellules Mucipares, INSERM Unite No. 377, Lille, 59045, Fr.
SOURCE: Experimental Cell Research (1997), 235(1), 100-107
CODEN: ECREAL; ISSN: 0014-4827
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Malignant transformation of epithelial cells is associated with abnormal glycosylation of mucins. The aim of this work was to evaluate the changes in the O-glycosylation processes during differentiation of tumor cells by performing in vitro reactions using crude microsomal prepns. obtained from a subpopulation of HT-29 cells capable of differentiating into mucin-secreting cells (HT-29 MTX cells). The reactions of O-glycosylation were carried out at different times of culture: before confluence (Day 5), when cells are still undifferentiated, and after confluence (Day 21), when cells display a mucin-secreting phenotype. As acceptor for the UDP-N-acetylgalactosamine:polypeptide N-acetylgalactosaminyltransferase (GalNAc transferase), the peptide motif TTSAPTTS (tandem repeat deduced from MUC5AC human gastric gene, expressed in HT-29 MTX cells) was used. A higher rate of enzyme activity was observed in preconfluent cells, and anal. by capillary electrophoresis and electrospray mass spectrometry showed a different pattern of galactosaminylation in pre- and postconfluent cells. Core 1 UDP-galactose:N-acetyl-α-galactosaminyl- R 3-β-galactosyltransferase (3-β-galactosyltransferase) activity also decreased with the differentiation, whereas CMP-neuraminic acid:galactose-β-1, 3-N-acetyl-α-galactosaminyl-R 3-α-sialyltransferase activity increased. In comparison, the evolving process of mucin biosynthesis was tested by the anal. of purified mucins of HT-29 MTX cells, in amino acid and carbohydrate composition, and immunoreactivity assays using several antibodies and lectins. The results suggested that (i) no mucins were detected at Day 5, while the GalNAc transferase and 3-β-galactosyltransferase activities were already at high rates; (ii) the mucins purified from postconfluent cells showed a high content of sialic acid in an α-2,3-linkage to galactose residues; and (iii) cellular differentiation seemed to be accompanied by more regulated processes of glycosylation. This study of the O-glycosylation in HT-29 MTX cells is thus an interesting approach to analyzing the regulation of mucin biosynthesis during cellular differentiation.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 23 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 15

ACCESSION NUMBER: 1997:382247 CAPLUS Full-text
DOCUMENT NUMBER: 127:93204
TITLE: Expression of β1-4 N-acetylgalactosaminyl -transferase gene in the developing rat brain and retina: mRNA, protein immunoreactivity and enzyme activity
AUTHOR(S): Daniotti, J. L.; Fritz, V. M. Rosales; Martina, J. A.; Furukawa, K.; Maccioni, H. J. F.
CORPORATE SOURCE: Centro de Investigaciones en Quimica Biologica de Cordob, CIQUIBIC (UNC-CONICET), Departmento de Quimica Biologica, Facultad de Ciencias Quimicas, Universidad Nacional de Cordoba, AP 4, CC 61, Cordoba, 5000, Argent.
SOURCE: Neurochemistry International (1997), 31(1), 11-19
CODEN: NEUIDS; ISSN: 0197-0186
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The developmental pattern of expression of the UDP-GalNac:GM3 N-acetylgalactosaminyltransferase (GalNAc-T) gene was examined in the rat brain and retina. A GalNAc-T cDNA cloned from a rat olfactory bulb cDNA library was used as a probe for Northern blot and in situ hybridization expts. and a rabbit polyclonal antibody to rat GalNAc-T peptide was used for Western blot anal. In Northern blot expts., a single .apprx. 3 kb transcript was detected both in brain and retina. In brain, the abundance of this transcript increased from E15 to PN1-5 and then declined while, in retina, it increased steadily from PN1 to PN13-24. The developmental trends of GalNAc-T mRNA expression, GalNAc-T immunoreactive protein and GalNAc-T activity were comparable in brain. In retina, however, GalNAc-T activity and GalNAc-T peptide immunoreactivity followed developmental patterns that were similar between them and different from that of the specific mRNA. Results suggest that post-transcriptional controls of the GalNAc-T gene expression operate in the rat CNS, which are particularly evident in retina. The expression of the GalNAc-T gene in glial and neuronal cells was examined in rat retina cell cultures by in situ hybridization. The GalNAc-T mRNA was abundant in GM1+/GD3- neurons and almost absent in the flat, GM1-/GD3+ Muller glia-derived cells.
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 24 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 16
ACCESSION NUMBER: 1996:666412 CAPLUS Full-text
DOCUMENT NUMBER: 125:321179
TITLE: A family of UDP-GalNAc: polypeptide N-acetylgalactosaminyl-transferases control the initiation of mucin-type O-linked glycosylation
AUTHOR(S): Clausen, Henrik; Bennett, Eric P.
CORPORATE SOURCE: School of Dentistry, University of Copenhagen, Copenhagen, DK-2200, Den.
SOURCE: Glycobiology (1996), 6(6), 635-646
CODEN: GLYCE3; ISSN: 0959-6658
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 82 refs. on the mucin O-glycosylation, structure, organ expression, and genes of UDP-GalNAc: polypeptide N- acetylgalactosaminyl-transferases.

L30 ANSWER 25 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:52821 CAPLUS Full-text
DOCUMENT NUMBER: 124:80718
TITLE: Molecular cloning of cDNA for human N-acetylgalactosaminyltransferase
INVENTOR(S): Clausen, Henrik
PATENT ASSIGNEE(S): Bay Development Corp. SA, Switz.
SOURCE: Brit. UK Pat. Appl., 43 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

GB 2288401	A1	19951018	GB 1994-7484	19940415
PRIORITY APPLN. INFO.:			GB 1994-7484	19940415

AB An N-acetylgalactosaminyltransferase enzyme derived from human placenta has been cloned and sequenced.

L30 ANSWER 26 OF 67 MEDLINE on STN DUPLICATE 17
ACCESSION NUMBER: 96025800 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 7592619
TITLE: Purification and cDNA cloning of a human UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase.
AUTHOR: White T; Bennett E P; Takio K; Sorensen T; Bonding N; Clausen H
CORPORATE SOURCE: Faculty of Health Sciences, School of Dentistry, University of Copenhagen, Denmark.
SOURCE: Journal of biological chemistry, (1995 Oct 13) 270 (41) 24156-65.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X85018; GENBANK-X85019
ENTRY MONTH: 199512
ENTRY DATE: Entered STN: 19960124
Last Updated on STN: 19970203
Entered Medline: 19951204

AB A UDP-GalNAc:polypeptide N-acetylgalactosaminyl- transferase (GalNAc-transferase) from human placenta was purified to apparent homogeneity using a synthetic acceptor peptide as affinity ligand. The purified GalNAc-transferase migrated as a single band with an approximate molecular weight of 52,000 by reducing sodium dodecyl sulfate-polyacrylamide gel electrophoresis. Based on a partial amino acid sequence, the cDNA encoding the transferase was cloned and sequenced from a cDNA library of a human cancer cell line. The cDNA sequence has a 571-amino acid coding region indicating a protein of 64.7 kDa with a type II domain structure. The deduced protein sequence showed significant similarity to a recently cloned bovine polypeptide GalNAc-transferase (Homa, F.L., Hollanders, T., Lehman, D.J., Thomsen, D.R., and Elhammer, A.P. (1993) J. Biol. Chemical 268, 12609-12616). A polymerase chain reaction construct was expressed in insect cells using a baculovirus vector. Northern analysis of eight human tissues differed clearly from that of the bovine GalNAc-transferase. Polymerase chain reaction cloning and sequencing of the human version of the bovine transferase are presented, and 98% similarity at the amino acid level was found. The data suggest that the purified human GalNAc-transferase is a novel member of a family of polypeptide GalNAc-transferases, and a nomenclature GalNAc-T1 and GalNAc-T2 is introduced to distinguish the members.

L30 ANSWER 27 OF 67 MEDLINE on STN
ACCESSION NUMBER: 96109207 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 8618846
TITLE: T-cell-specific deletion of a polypeptide N-acetylgalactosaminyl-transferase gene by site-directed recombination.
AUTHOR: Hennet T; Hagen F K; Tabak L A; Marth J D
CORPORATE SOURCE: Howard Hughes Medical Institute, Department of Medicine, University of California, La Jolla 92093, USA.
CONTRACT NUMBER: DE08108 (NIDCR)
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1995 Dec 19) 92 (26) 12070-4.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199606
ENTRY DATE: Entered STN: 19960620
Last Updated on STN: 20000303
Entered Medline: 19960607

AB UDP-N-acetylgalactosamine (GalNAc): polypeptide N- acetylgalactosaminyltransferase (polypeptide GalNAc-T) catalyzes transfer of the monosaccharide GalNAc to serine and

threonine residues, thereby initiating O-linked oligosaccharide biosynthesis. Previous studies have suggested the possibility of multiple polypeptide GalNAc-Ts, although attachment of saccharide units to polypeptide or lipid in generating oligosaccharide structures in vertebrates has been dependent upon the activity of single gene products. To address this issue and to determine the relevance of Oglycosylation variation in T-cell ontogeny, we have directed Cre/loxP mutagenic recombination to the polypeptide GalNAc-T locus in gene-targeted mice. Resulting deletion in the catalytic region of polypeptide GalNAc-T occurred to completion on both alleles in thymocytes and was found in peripheral T cells, but not among other cell types. Thymocyte O-linked oligosaccharide formation persisted in the absence of a functional targeted polypeptide GalNAc-T allele as determined by O-glycan-specific lectin binding. T-cell development and colonization of secondary lymphoid organs were also normal. These results indicate a complexity in vertebrate O-glycan biosynthesis that involves multiple polypeptide GalNAc-Ts. We infer the potential for protein-specific O-glycan formation governed by distinct polypeptide GalNAc-Ts.

L30 ANSWER 28 OF 67 MEDLINE on STN DUPLICATE 18
ACCESSION NUMBER: 96004600 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 7567994
TITLE: Regulation of glycolipid synthesis in HL-60 cells by antisense oligodeoxynucleotides to glycosyltransferase sequences: effect on cellular differentiation.
AUTHOR: Zeng G; Ariga T; Gu X B; Yu R K
CORPORATE SOURCE: Department of Biochemistry and Molecular Biophysics, Medical College of Virginia, Virginia Commonwealth University, Richmond 23298-0614, USA.
CONTRACT NUMBER: NS-11853 (NINDS)
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1995 Sep 12) 92 (19) 8670-4. Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199510
ENTRY DATE: Entered STN: 19951227
Last Updated on STN: 19980206
Entered Medline: 19951023
AB Treatment of the human promyelocytic leukemia cell line HL-60 with antisense oligodeoxynucleotides to UDP-N-acetylgalactosamine:beta-1,4-N- acetylgalactosaminyl-transferase (GM2-synthase; EC 2.4.1.92) and CMP-sialic acid:alpha-2,8-sialyltransferase (GD3-synthase; EC 2.4.99.8) sequences effectively down-regulated the synthesis of more complex gangliosides in the ganglioside synthetic pathways after GM3, resulting in a remarkable increase in endogenous GM3 with concomitant decreases in more complex gangliosides. The treated cells underwent monocytic differentiation as judged by morphological changes, adherent ability, and nitroblue tetrazolium staining. These data provide evidence that the increased endogenous ganglioside GM3 may play an important role in regulating cellular differentiation and that the antisense DNA technique proves to be a powerful tool in manipulating glycolipid synthesis in the cell.

L30 ANSWER 29 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:987146 CAPLUS Full-text
DOCUMENT NUMBER: 124:78122
TITLE: Cloning and sequence homology of a rat UDP-GalNAc:polypeptide N-acetylgalactosaminyltransfera se
AUTHOR(S): Hagen, Fred K.; Gregoire, Christine A.; Tabak, Lawrence A.
CORPORATE SOURCE: Dep. Dental Res. and Biochemistry, Univ. Rochester, Rochester, NY, 14642, USA
SOURCE: Glycoconjugate Journal (1995), 12(6), 901-9 CODEN: GLJOEW; ISSN: 0282-0080
PUBLISHER: Chapman & Hall
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase (polypeptide GalNAc transferase) cDNA was amplified from rat sublingual, submandibular and parotid glands, brain, skeletal muscle, and liver, using the polymerase chain reaction (PCR) and sequences derived from bovine polypeptide GalNAc transferase-Type 1 (polypeptide GalNAc transferase-

T1). The transcripts encoding the rat sublingual gland and bovine enzymes were 91% identical in nucleotide sequence, except in their 5' and 3' untranslated regions. The enzymes encoded by the rat and bovine cDNAs were 559 amino acids in length and were virtually identical (98% amino acid sequence identity and 99.5% homologous overall). Northern blot anal. indicates that the polypeptide GalNAc transferase-T1 transcripts are expressed in many tissues but as widely differing levels. Although the amino acid sequence of polypeptide GalNAc transferase-T1 is conserved among mammals, the pattern of tissue expression varies between rats and humans. For example, the steady-state level of polypeptide GalNAc transferase-T1 transcript is quite low in lung relative to other rat tissues, whereas high expression of this transcript is detected in human lung. Therefore, we surmise that isoforms of polypeptide GalNAc transferase must exist and that isoforms are expressed in a tissue-dependent fashion. Searches of the GenBank database have revealed homologous sequences for several isoforms derived from several human tissues. In addition, hypothetical proteins from C. elegans also display strong homol.; evidence suggests six ancestral isoforms of polypeptide GalNAc transferases may exist in C. elegans.

L30 ANSWER 30 OF 67 MEDLINE on STN DUPLICATE 19
ACCESSION NUMBER: 96318021 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 8748160
TITLE: Cloning and expression of a porcine UDP-GalNAc: polypeptide N-acetylgalactosaminyl transferase.
AUTHOR: Yoshida A; Hara T; Ikenaga H; Takeuchi M
CORPORATE SOURCE: Central Laboratories for Key Technology, Kirin Brewery Co., Ltd, Fukuura, Japan.
SOURCE: Glycoconjugate journal, (1995 Dec) 12 (6) 824-828. Journal code: 8603310. ISSN: 0282-0080.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199611
ENTRY DATE: Entered STN: 19961219
Last Updated on STN: 19961219
Entered Medline: 19961115

AB By employing a bovine UDP-N-acetylgalactosamine: polypeptide N- acetylgalactosaminyl transferase (O-GalNAc transferase) cDNA as a probe, we isolated four overlapping cDNAs from a porcine lung cDNA library. Both the nucleotide sequence of the porcine cDNA and the predicted primary structure of the protein (559 amino acids) proved to be very similar to those of the bovine enzyme (95% and 99% identity, respectively). Transient expression of the clone in COS-7 cells, followed by enzymatic activity assays, demonstrated that this cDNA sequence encodes a porcine O-GalNAc transferase. The intracellular O-GalNAc transferase activity was increased approximately 100-fold by transfecting cells with the porcine cDNA.

L30 ANSWER 31 OF 67 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1995:438270 BIOSIS Full-text
DOCUMENT NUMBER: PREV199598452570
TITLE: Expression of the T antigen on a T-lymphoid cell line, SupT1.
AUTHOR(S): Nakada, Hiroshi; Inoue, Mizue; Tanaka, Nobuhiro; Wakamiya, Nobutaka; Yamashina, Ikuo [Reprint author]
CORPORATE SOURCE: Dep. Biotechnol., Fac. Eng., Kyoto Sangyo Univ., Motoyama, Kamigamo, Kita-ku, Kyoto 603, Japan
SOURCE: Glycoconjugate Journal, (1995) Vol. 12, No. 3, pp. 356-359. ISSN: 0282-0080.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Oct 1995
Last Updated on STN: 10 Oct 1995

AB We have measured glycosyltransferase activities of SupT1 cells, a T-lymphoid cell line shown to react with autoantibodies in the sera of many HIV patients. Since considerable alpha-N- acetylgalactosaminyl-transferase and beta-1,3 galactosyltransferase activities were found in SupT1 cells, at least the O-glycan core 1 structure can probably be synthesized. FACS analysis using an anti-T monoclonal antibody showed expression of the T antigen (Gal beta-1-3 GalNAc). Glycoproteins with the T antigen were isolated by immunoprecipitation with the anti-T antibody from a SupT1 cell lysate labelled

metabolically with 3H-glucosamine and then analysed by SDS-PAGE. It was revealed that the precipitate contained a glycoprotein with a molecular weight corresponding to that of leukosialin. O-glycans were prepared from the immunoprecipitate by alkaline-borohydride treatment and then fractionated on Bio-Gel P-2, GalNAcOH and Gal-GalNAcOH being identified inter alia. These results suggest that an anti-T antibody may be included in the autoantibodies found in HIV-1 infected individuals.

L30 ANSWER 32 OF 67 MEDLINE on STN DUPLICATE 20
ACCESSION NUMBER: 95392439 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 7545050
TITLE: Cystic fibrosis and pancreatic cancer cells synthesize and secrete MUC1 type mucin gene product.
AUTHOR: Dahiya R; Kwak K S; Ho S B; Yoon W H; Kim Y S
CORPORATE SOURCE: Department of Medicine, University of California, San Francisco/Veterans Administration Medical Center, USA.
CONTRACT NUMBER: CA24321 (NCI)
CA64872 (NCI)
DK47517 (NIDDK)
+
SOURCE: Biochemistry and molecular biology international, (1995 Feb) 35 (2) 351-62.
Journal code: 9306673. ISSN: 1039-9712.
PUB. COUNTRY: Australia
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199510
ENTRY DATE: Entered STN: 19951020
Last Updated on STN: 19980206
Entered Medline: 19951012

AB The purpose of this study was to determine the biochemical and molecular characteristics of mucin synthesized by cystic fibrosis cells (CFPAC-1), a pancreatic cancer cell line derived from a patient with cystic fibrosis, and pancreatic cancer (SW-1990) cell lines. High molecular weight glycoproteins (HMG) were quantified by [3H]-glucosamine labeling and chromatography on sepharose CL-4B. Mucin gene expression was determined by using cDNA probes for 2 distinct intestinal mucins (MUC2 and MUC3) and one stomach mucin (MUC1). The specific mucin core epitopes were confirmed by immunoblots using antibodies that recognize T, Tn, sialosyl Tn, MUC1, MUC2, and MUC3. The results of these experiments demonstrate that CFPAC-1 cells contained 1.25 fold and 1.4 fold more HMG in the membrane and cytosolic fractions, however, secreted 4-fold more HMG into the medium compared to SW-1990 cells. The HMG of SW-1990 was found to be mucinous in nature and not proteoglycans, as it was not susceptible to hyalurinidase, heparinase and chondroitinase ABC. The HMG of CFPAC-1 was also predominantly (80%) mucinous but with small amounts of proteoglycans. mRNA and immunoblot analysis suggest that these CFPAC-1 and SW-1990 cells predominantly express MUC1 apomucin, small amounts of MUC2 apomucin, and no MUC3. Pulse chase labeling and immunoprecipitation of MUC1 type mucin using the 139H2 monoclonal antibody demonstrated that different sizes of mucin gene product were present in both cell lines, corresponding to the known length polymorphism of this mucin. Both T and Tn antigens were significantly higher in CFPAC-1 and SW-1990 cells as compared to sialosyl Tn antigen. These findings were associated with the increased activities of polypeptidyl N-acetylgalactosaminyl transferase and b1,3-galactosyltransferase. These investigations demonstrate for the first time that cystic fibrosis cells (CFPAC-1) secrete and synthesize high amounts of mucin which is associated with high levels of MUC1 mRNA, low levels of MUC2 mRNA and non detectable MUC3 mRNA.

L30 ANSWER 33 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1995:340161 SCISEARCH Full-text
THE GENUINE ARTICLE: QY160
TITLE: GLYCOSYLTRANSFERASE INHIBITORS AND STUDIES OF UDP-GALACTOSE-GLOBOSIDE GALACTOSYLTRANSFERASE
AUTHOR: MCCLUER R H (Reprint); KOUL O
CORPORATE SOURCE: EUNICE KENNEDY SHRIVER CTR MENTAL RETARDAT INC, WALTHAM, MA 02254 (Reprint); HARVARD UNIV, SCH MED, DEPT NEUROL, BOSTON, MA 02215
COUNTRY OF AUTHOR: USA
SOURCE: BIOCHEMISTRY-MOSCOW, (MAR 1995) Vol. 60, No. 3, pp. 307-315.
ISSN: 0006-2979.

PUBLISHER: PLENUM PUBL CORP, CONSULTANTS BUREAU 233 SPRING ST, NEW YORK, NY 10013.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 30
ENTRY DATE: Entered STN: 1995
Last Updated on STN: 1995
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB There is now a large body of evidence indicating that glycoconjugates are involved in a wide variety of processes that influence cell growth, differentiation, cell sociological behavior, and response to environmental conditions. The synthesis and expression of this class of compounds appears to be regulated to a large extent by the activities of the glycosyltransferases which are responsible for their biosynthesis. The level of glycosyltransferase activities in cells could be regulated at many levels. Thus, factors that influence transcription and splicing of the transferase genes, stability of the mRNAs, translation, and post-translation processes are all probably involved. Post-translation processes that affect the level of enzyme activity could include proteolytic degradation, glycosylation, phosphorylation, sulfation, acylation, and the presence of activator and inhibitory factors. Although the presence of at least seven different glycosyltransferase inhibitors have been reported, this type of regulation has received relatively little attention. It appears from the data cited in this review that, in many instances, cellular inhibitors of glycosyltransferase activities may play a key role in the regulation of transferase activities and the expression of glycoconjugates. This type of post-translational regulation of glycosyltransferase activities deserves increased attention.

L30 ANSWER 34 OF 67 MEDLINE on STN
ACCESSION NUMBER: 94266797 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 8206912
TITLE: Influence of acceptor substrate primary amino acid sequence on the activity of human UDP-N-acetylgalactosamine:polypeptide N-acetylgalactosaminyltransferase. Studies with the MUC1 tandem repeat.
AUTHOR: Nishimori I; Johnson N R; Sanderson S D; Perini F; Mountjoy K; Cerny R L; Gross M L; Hollingsworth M A
CORPORATE SOURCE: Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha 68198-6805.
CONTRACT NUMBER: CA36727 (NCI)
CA57362 (NCI)
DK44762 (NIDDK)
+
SOURCE: Journal of biological chemistry, (1994 Jun 10) 269 (23) 16123-30.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 19940721
Last Updated on STN: 19960129
Entered Medline: 19940713

AB Synthetic peptides (30 and 20 residues long) corresponding to the native MUC1 tandem repeat sequence (20 residues long) were glycosylated in vitro using UDP-[3H]GalNAc and lysates from the human breast tumor cell line MCF7. Purified glycopeptides were sequenced on a gas-phase sequenator, and glycosylated positions were determined by measuring the incorporated radioactivity in fractions collected following each round of Edman degradation. The results showed that 2 of 3 threonines on the MUC1 tandem repeat peptides were glycosylated at the following positions: GVTSAPDTRPAPGSTAPPAH (underlined Thr residues indicate positions of GalNAc attachment); no glycosylation of serine residues was detected. Determination of the mass of the glycopeptides by mass spectrometry showed that a maximum of two molecules of GalNAc were covalently linked to each 20-residue repeat unit in the peptides. The influence of substrate primary amino acid sequence in determining the substrate specificity of UDP-N-acetylgalactosamine:polypeptide N-acetylgalactosaminyl-transferase activity was evaluated using as acceptor substrates a series of overlapping 9-residue peptides that represent a moving set through the tandem repeat of the MUC1 mucin.

In addition, the influence of primary amino acid sequence on acceptor substrate activity was evaluated using several peptides that contained single or double amino acid substitutions (relative to the native human MUC1 sequence). These included substitutions in the residues that were glycosylated and substitutions in the surrounding primary amino acid sequence. This study demonstrates that primary amino acid sequence, length, and relative position of the residue to be glycosylated dramatically affect the ability of peptides to serve as acceptor substrates for UDP-N- acetylgalactosamine:polypeptide N-acetylgalactosaminyltransferase.

L30 ANSWER 35 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 21

ACCESSION NUMBER: 1994:716455 SCISEARCH Full-text
THE GENUINE ARTICLE: PQ056
TITLE: BETA-1-4N-ACETYLGALACTOSAMINYLTRANSFERASE CAN SYNTHESIZE BOTH ASIALOGLYCOSPHINGOLIPID G(M2) AND GLYCOSPHINGOLIPID G(M2) IN-VITRO AND IN-VIVO - ISOLATION AND CHARACTERIZATION OF A BETA-1-4N-ACETYLGALACTOSAMINYLTRANSFERASE CDNA CLONE FROM RAT ASCITES HEPATOMA-CELL LINE AH7974F
AUTHOR: HIDARI K I P J (Reprint); ICHIKAWA S; FURUKAWA K; YAMASAKI M; HIRABAYASHI Y
CORPORATE SOURCE: INST PHYS & CHEM RES, FRONTIER RES PROGRAM, GLYCO CELL BIOL LAB, WAKO, SAITAMA 35101, JAPAN; KONICA CORP, CTR DEV, SECT 2, HINO, TOKYO 191, JAPAN; NAGASAKI UNIV, SCH MED, DEPT ONCOL, NAGASAKI 852, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: BIOCHEMICAL JOURNAL, (1 NOV 1994) Vol. 303, Part 3, pp. 957-965.
ISSN: 0264-6021.
PUBLISHER: PORTLAND PRESS, 59 PORTLAND PLACE, LONDON, ENGLAND W1N 3AJ
.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 54
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We have cloned a cDNA encoding beta 1-4N- acetylgalactosaminyl-transferase (EC 2.4.1.92) (GalNAc-T) from rat ascites hepatoma of the free-cell type AH7974F. The cell line only expressed asialo-series glycosphingolipids (GSLs) including asialo-G(M2) [Taki, T., Hirabayashi, Y., Ishiwata, Y., Matsumoto, M., and Kojima, K. (1979) Biochim. Biophys. Acta 572, 113-120]. The cDNA, pGNA56, was isolated by screening AH7974F cDNA library in lambda gt10 with a probe. The probe was obtained from AH7974F cDNA by PCR using primers with the nucleotide sequence of the human GalNAc-T cDNA. The amino acid sequence deduced from the nucleotide sequence of pGNA56 exhibited 88% similarity to the human GalNAc-T sequence. The enzyme was a typical type II membrane protein, which consisted of a short N-terminal residue, a transmembrane region, and a long C-terminal residue, including the catalytic domain. The substrate specificity of rat GalNAc-T was determined using homogenates from cells into which the cDNA clone was transfected. The enzyme catalysed not only the formation of G(M2) and G(D2) from G(M3) and G(D3) respectively, but also asialo-G(M2) from CDH. It also acted on GSL substrates, including G(M1b), sialylpara-globoside and G(D1 alpha). On the other hand, the enzyme did not transfer GalNAc to soluble substrates such as glycoproteins and oligosaccharide. The GSL compositional and immunocytochemical analyses of stable transfectants obtained by transfection of the cDNA showed simultaneous expression of asialo-G(M2) and G(M2) on the plasma membrane. Therefore, we concluded that the formation of asialo-G(M2), G(M2) and G(D2) was catalysed by the single GalNAc-T. Northern-blot hybridization showed that the GalNAc-T mRNA was strongly expressed in rat brain, testis, and spleen. The gene was also expressed in rat normal liver to a lesser extent. We found the GSLs in asialo- and alpha-pathways such as asialo-G(M1) and G(D1 alpha) in the rat tissues by using a sensitive t.l.c.-immunostaining method. These observations also supported our conclusion that the single GalNAc-T synthesizes asialo-G(M2), G(M2) and G(D2) in vivo.

L30 ANSWER 36 OF 67 LIFESCI COPYRIGHT 2006 CSA on STN

ACCESSION NUMBER: 94:41277 LIFESCI Full-text
TITLE: Purification, cloning, and expression of a bovine

UDP-GalNAc: Polypeptide N-acetylgalactosaminyl-transferase

AUTHOR: Hagen, F.K.; Van Wuyckhuyse, B.; Tabak, L.A.*

CORPORATE SOURCE: Dep. Dent. Res., Sch. Med. and Dent., Univ. Rochester, 601 Elmwood Ave., Box 611, Rochester, NY 14642, USA

SOURCE: J. BIOL. CHEM., (1993) vol. 268, no. 25, pp. 18960-18965. ISSN: 0021-9258.

DOCUMENT TYPE: Journal

FILE SEGMENT: N; G

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Partial amino acid sequence was obtained from UDP-GalNAc:polypeptide N-acetylgalactosaminyl-transferase (polypeptide GalNAc transferase) purified from bovine colostrum. Oligonucleotide primers designed from these sequences were used to amplify and clone a polypeptide GalNAc transferase cDNA from bovine placental mRNA. The cDNA encodes an open reading frame, which is 519 amino acids in length and contains the predicted N-terminal and internal amino acid sequence derived from three Lys-C peptides obtained from the purified protein. There was no sequence homology with the UDP-GalNAc:Fuc alpha 1,2 Gal alpha 1,3 GalNAc transferase.

L30 ANSWER 37 OF 67 MEDLINE on STN DUPLICATE 22

ACCESSION NUMBER: 93286099 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 7685345

TITLE: Isolation and expression of a cDNA clone encoding a bovine UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase.

AUTHOR: Homa F L; Hollander T; Lehman D J; Thomsen D R; Elhammer A P

CORPORATE SOURCE: Molecular Biology Research Unit, Upjohn Company, Kalamazoo, Michigan 49001.

SOURCE: Journal of biological chemistry, (1993 Jun 15) 268 (17) 12609-16.
Journal code: 2985121R. ISSN: 0021-9258.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

OTHER SOURCE: GENBANK-L07780

ENTRY MONTH: 199307

ENTRY DATE: Entered STN: 19930723
Last Updated on STN: 19970203
Entered Medline: 19930713

AB NH2-terminal amino acid sequence obtained from a UDP-GalNAc:polypeptide N-acetylgalactosaminyl-transferase (GalNAc-transferase) isolated from bovine colostrum was used for the construction of synthetic oligonucleotide primers. Subsequent polymerase chain reaction and library screenings of a bovine intestine cDNA library produced seven positive clones. The largest clone had a 2294-base pair insert that contained an open reading frame coding for a protein composed of 559 amino acids with a predicted polypeptide molecular mass of 64,173 Da. The cloned molecule has no significant sequence homology to previously reported cloned glycosyltransferases, but appears to have a similar domain structure. It is a type II membrane protein with a 23-amino acid putative transmembrane region starting 8 amino acids from the NH2 terminus. The transmembrane segment of the molecule is immediately followed by a sequence rich in proline residues. The molecule contains three consensus sequences for N-linked glycosylation and five predicted sites for O-glycosylation. Northern blot analysis of poly(A+) mRNA isolated from Madin-Darby bovine kidney cells, bovine mammary tissue, and eight human tissues demonstrated the expression of two transcripts differing in size by approximately 1 kilobase. The cloned DNA was expressed in insect cells using a baculovirus vector. This resulted in an almost 100-fold increase in GalNAc-transferase activity in lysates prepared from cells infected with virus containing the GalNAc-transferase gene compared to cells infected with virus containing DNA coding for an unrelated molecule or uninfected cells. Immunoprecipitation from lysates prepared from infected cells labeled in vivo with [35S] methionine showed a large increase in the recovery of an approximately 67-kDa protein.

L30 ANSWER 38 OF 67 MEDLINE on STN DUPLICATE 23

ACCESSION NUMBER: 94036830 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 8221677

TITLE: Genetic and enzymatic basis for the differential expression of GM2 and GD2 gangliosides in human cancer cell lines.

AUTHOR: Yamashiro S; Ruan S; Furukawa K; Tai T; Lloyd K O; Shiku H; Furukawa K
CORPORATE SOURCE: Department of Oncology, Nagasaki University School of Medicine, Japan.
CONTRACT NUMBER: CA-08478 (NCI)
CA-60680 (NCI)
SOURCE: Cancer research, (1993 Nov 15) 53 (22) 5395-400.
Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199312
ENTRY DATE: Entered STN: 19940117
Last Updated on STN: 19970203
Entered Medline: 19931201

AB Using beta 1,4-N-acetylgalactosaminyltransferase (EC 2.4.1.92) complementary DNA, the correlation of gene expression, enzyme activity, and expression of ganglioside antigens was analyzed in 20 human tumor cell lines. In many lines, GM2 and/or GD2 were the most complex structures examined. Northern blot analysis revealed 5.2- and 3.0-kilobase mRNAs in almost all cell lines expressing GD2 and/or GM2. Some melanoma lines, however, showed no bands although they expressed fairly high levels of GD2. These cell lines expressed very high levels of alpha 2,8-sialyltransferase and the resulting product, GD3. Semiquantitative RT-PCR demonstrated that even cell lines with no bands in Northern blot contained 0.4-2.5% of mRNA level in the highest expressing cell line. These results indicate that GD2 expression on individual cell lines is regulated not only by the expression level of the N- acetylgalactosaminyl transferase but also by the amount of its precursor structure (GD3) and alpha 2,8-sialyltransferase present in the cells. beta 1,4-N-acetylgalactosaminyltransferase activities and mRNA levels generally correlated quite closely. A few lines, however, showed lower enzyme activities than expected from their mRNA levels, indicating the possibility that the enzyme is being regulated by translational or posttranslational modification such as phosphorylation and glycosylation as well as by transcriptional regulation. Depending on their patterns of ganglioside synthesis and expression, the lines examined were classified into 6 groups which were characteristic of different tumor cell types.

L30 ANSWER 39 OF 67 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 93:57614 LIFESCI Full-text
TITLE: GD2 ganglioside on human T-lymphotropic virus type I-infected T cells: Possible activation of beta -1,4-N-acetylgalactosaminyl transferase gene by p40 super(tax).
AUTHOR: Furukawa, K.; Akagi, T.; Nagata, Y.; Yamada, Y.; Shimotohno, K.; Cheung, N.-K.V.; Shiku, H.; Furukawa, K.
CORPORATE SOURCE: Dep. NAI-KONG Oncol., Nagasaki Univ. Sch. Med., Sakamoto, Nagasaki 852, Japan
SOURCE: PROC. NATL. ACAD. SCI. USA., (1993) vol. 90, no. 5, pp. 1972-1976.
ISSN: 0027-8424.
DOCUMENT TYPE: Journal
FILE SEGMENT: M; V
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Ganglioside expression on adult T-cell leukemia (ATL) and human T-cell lymphotropic virus type I (HTLV-I)-infected cells was determined by using a panel of monoclonal antibodies. ATL lines and HTLV-I-infected cells specifically expressed GD2. Leukemia cells from ATL patients generally expressed low levels of GD2. No other type of leukemia cells and normal peripheral T cells expressed GD2 during in vitro culture. The appearance of GD2 in the cultured ATL cells corresponded with the expression of p40 super(tax), a producf of the HTLV-I gene. Concordance between mRNA expressionfor the HTLV-I tax1/rex1 genes and the beta -1,4-N-acetylgalactosaminyl-transferase gene was also observed in uncultured ATL cells. These results suggest that high GD2 expression was due to neosynthesis from precursor GD3 by increased expression of this enzyme induced by p40 super(tax) in vitro and in vivo.

L30 ANSWER 40 OF 67 MEDLINE on STN DUPLICATE 24
ACCESSION NUMBER: 93185091 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 8443822
TITLE: Mucin synthesis and secretion in various human epithelial

cancer cell lines that express the MUC-1 mucin gene
.

AUTHOR: Dahiya R; Kwak K S; Byrd J C; Ho S; Yoon W H; Kim Y S
CORPORATE SOURCE: Department of Medicine, University of California, San Francisco/Veterans Administration Medical Center 94121.
CONTRACT NUMBER: CA24321 (NCI)
SOURCE: Cancer research, (1993 Mar 15) 53 (6) 1437-43.
Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199304
ENTRY DATE: Entered STN: 19930416
Last Updated on STN: 19970203
Entered Medline: 19930407

AB Previous studies have suggested that mucin gene expression is tissue-specific; however, the relationship between unique mucin gene products and the biochemical properties of mucins is unknown. The purpose of this study was to determine the biochemical and molecular characteristics of mucin synthesized by adenocarcinoma cell lines derived from breast (ZR-75-1), stomach (MGC-803), pancreas (Capan-2), and lung (Chago K-1). Mucin was quantitated by [3H]glucosamine labeling and Sepharose CL-4B chromatography. The mucinous nature of the labeled high molecular weight glycoproteins (HMG) was verified by alkaline borohydride treatment, cesium chloride density gradient ultracentrifugation, and sodium dodecyl sulfate-polyacrylamide gel electrophoresis. Specific mucin gene expression was determined using cDNA probes for 2 distinct intestinal mucins (MUC-2 and MUC-3) and one breast cancer mucin (MUC-1). Specific core mucin proteins were confirmed by immunoblots using antibodies that recognize MUC-1, MUC-2, and MUC-3 core peptides. These experiments demonstrate that all cell lines contained HMG in the medium, cytosol, and membrane fractions. The HMG was mucinous in breast, pancreatic, and lung cell lines. In contrast, most of the HMG secreted by the gastric cell line was proteoglycan-like, due to its susceptibility to hyaluronidase, heparinase, and chondroitinase avidin-biotin complex. Ion-exchange (DEAE-Sephacel) chromatography of [3H]glucosamine-labeled HMG demonstrated that the acidic or basic nature of the mucin was different in all cancer cell lines tested. Despite these differences, mRNA and immunoblot analysis suggest that all cell lines predominantly express MUC-1 apomucin, small amounts of MUC-2 apomucin, and no MUC-3. Immunoprecipitation of MUC-1-type mucin using the 139H2 monoclonal antibody demonstrated that different sizes of mucin peptides were present in all cell lines, corresponding to the known length polymorphism of this mucin. The amount and nature of carbohydrate epitopes were analyzed by immunoblots using anti-T (peanut lectin), anti-Tn (91S8 monoclonal antibody), and anti-sialosyl Tn (JT10e monoclonal antibody). T and Tn antigens were significantly higher in breast and pancreatic cells as compared with lung and gastric cell lines. These findings correlated with increased activities of polypeptidyl N-acetylgalactosaminyl transferase and beta-1,3-galactosyltransferase.(ABSTRACT TRUNCATED AT 400 WORDS)

L30 ANSWER 41 OF 67 MEDLINE on STN DUPLICATE 25
ACCESSION NUMBER: 93092106 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 1458454
TITLE: Acute leukemia with t(1;3)(p36;q21), evolution to t(1;3)(p36;q21), t(14;17)(q32;q21), and loss of red cell A and Le(b) antigens.
AUTHOR: Marsden K A; Pearse A M; Collins G G; Ford D S; Heard S; Kimber R I
CORPORATE SOURCE: Department of Medicine, University of Tasmania, Hobart, Australia.
SOURCE: Cancer genetics and cytogenetics, (1992 Nov) 64 (1) 80-5.
Journal code: 7909240. ISSN: 0165-4608.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CASE REPORTS)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199301
ENTRY DATE: Entered STN: 19930129
Last Updated on STN: 19930129
Entered Medline: 19930112

AB At transformation of refractory anemia with ring sideroblasts to acute nonlymphocytic leukemia (ANLL) the bone marrow cells of a 75-year-old woman showed three different karyotypes, i.e., 46,XX,46,XX,t(1;3)(p36;q21) and 46,XX,t(1;3)(p36;q21),t(14;17)(q32;q21).

She received no antileukemic therapy, and 1 year later, all her bone marrow cells were t(1;3)(p36;q21),t(14;17)(q32;q21). In association with the onset and first 11 months of ANLL, the platelet count increased 10-fold to a peak of 750 x 10(9)/L, providing further evidence that the t(1;3)(p36;q21) translocation causes stimulation of thrombopoiesis. Six months after transformation, her red cells showed reduced expression of A and Leb antigens. Serum alpha-n-3-acetylgalactosaminyl transferase (blood group A transferase) and red cell adenylate kinase were both reduced. The genes for both these substances are at 9q34, which suggests an abnormality here, although cytogenetically chromosome 9 appeared normal. This is the first case with t(1;3)(p36;q21) to show concurrent loss of red cell antigens and the first report detailing the course of untreated ANLL with t(1;3)(p36;q21).

L30 ANSWER 42 OF 67 MEDLINE on STN DUPLICATE 26
ACCESSION NUMBER: 91105690 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 1988113
TITLE: Relationship of pancreatic cancer apomucin to mammary and intestinal apomucins.
AUTHOR: Byrd J C; Ho J J; Lamport D T; Ho S B; Siddiki B; Huang J; Yan P S; Kim Y S
CORPORATE SOURCE: Gastrointestinal Research Laboratory, VA Medical Center, University of California, San Francisco 94121.
CONTRACT NUMBER: CA24321 (NCI)
SOURCE: Cancer research, (1991 Feb 1) 51 (3) 1026-33. Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199102
ENTRY DATE: Entered STN: 19910329
Last Updated on STN: 19910329
Entered Medline: 19910228

AB Pancreatic cancer mucins have several carbohydrate antigens that are potentially useful in the detection of pancreatic cancers, but little is known about the core polypeptides of pancreatic cancer mucins. In this study, purified mucin from SW1990 pancreatic cancer xenografts was deglycosylated by treatment with hydrogen fluoride to give pancreatic cancer apomucin. Consistent with near-complete removal of carbohydrate, the apomucin had 10- to 70-fold decreased binding of lectins and, unlike the native mucin, served as an acceptor for polypeptidyl N- acetylgalactosaminyl transferase. Antibodies prepared against the apomucin did not bind to native mucin, and antibodies that bound to native mucin did not bind to apomucin. On the basis of cross-reaction with deglycosylated colon cancer mucin and intestinal mucin repeat peptide, apomucins from SW1990 pancreatic cancer xenografts contain the intestinal mucin repeat peptide. On the basis of binding of breast cancer-reactive monoclonal antibodies 139H2, DF3, and HMFG-2, apomucins from SW1990 pancreatic cancer xenografts also have the mammary mucin repeat peptide. Using complementary DNA probes specific for intestinal mucin and breast mucin sequences, both types of apomucin mRNA were detected in nude mouse xenografts of SW1990 cells. In immunohistochemical staining, antibody against deglycosylated SW1990 mucin stained normal breast and pancreas but not normal colon. Some pancreatic and mammary cancers and most colonic cancers, however, were stained by antibodies against both intestinal apomucin and mammary apomucin. We conclude that pancreatic cancers can produce mucins with the intestinal repeat peptide as well as those with mammary repeat peptide sequences.

L30 ANSWER 43 OF 67 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 91:79258 LIFESCI Full-text
TITLE: Two pathways for GM2(NeuGc) expression in mice: Genetic analysis.
AUTHOR: Kono, M.; Sekine, M.; Nakamura, K.; Hashimoto, Y.; Seyama, Y.; Yamakawa, T.; Suzuki, A.
CORPORATE SOURCE: Dep. Membr. Biochem., Tokyo Metrop. Inst. Med. Sci., Bunkyo-ku, Tokyo 113, Japan
SOURCE: J. BIOCHEM., TOKYO., (1991) vol. 109, no. 1, pp. 132-136.
DOCUMENT TYPE: Journal
FILE SEGMENT: G
LANGUAGE: English
SUMMARY LANGUAGE: English

AB We have reported that WHT/Ht mice express neither GM2(NeuGc) nor GM1(NeuGc) in the liver or erythrocytes due to a defect on the Ggm-2 gene, which was demonstrated to control the activity of UDP-GalNAc:GM3(NeuGc) N-acetylgalactosaminyl-transferase in mouse liver, and,

in addition, WHT/Ht mice do not express a detectable amount of GM2(NeuGc) but do express GM1(NeuGc) in tissues other than the liver and erythrocytes. In order to determine whether the phenotype of WHT/Ht mice exhibiting an undetectable amount of GM2(NeuGc) in these tissues is genetically controlled or not, we analyzed the expression of gangliosides in the progeny obtained on backcross mating between (BALB/c x WHT/Ht)F sub(1) and WHT/Ht mice, and in a GM2(NeuGc) congenic mouse, WHT.C. Concerning the expression of GM2(NeuGc) in the liver, lung, and kidney, 102 backcross mice could be segregated into two types. One type expressed a detectable amount of GM2(NeuGc) in the liver, lung, and kidney, and the other type did not.

L30 ANSWER 44 OF 67 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 91249038 EMBASE Full-text
DOCUMENT NUMBER: 1991249038
TITLE: Conversion of the human blood group H antigen to A antigen in vivo.
AUTHOR: Yang N.; Boettcher B.
CORPORATE SOURCE: Department of Biological Sciences, Newcastle University, Newcastle, NSW 2308, Australia
SOURCE: Immunology and Cell Biology, (1991) Vol. 69, No. 2, pp. 111-118. .
ISSN: 0818-9641 CODEN: ICBIEZ
COUNTRY: Australia
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 025 Hematology
026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 911216
Last Updated on STN: 911216
AB A-transferase (N-acetylgalactosaminyl transferase) was purified from human group A plasma using Sepharose 4B affinity chromatography. Human anti-A antibodies were purified from human serum by adsorption to an immunosorbent column and heat elution in order to detect the A antigen. Conditions appropriate for the development of the A antigen on O red cells were examined and several buffer systems were found to be equally effective. Expression of the developed A antigen was found to be similar to that on group A red cells, indicating that the system in vitro has similar activity to the system in vivo. The H antigen from human saliva was coupled to Sepharose 4B or absorbed to a nitrocellulose membrane. The A antigen was able to be developed on these materials by the action of group A-transferase. The procedures enabled the identification in vitro of sugar-transferase activities which can be useful in studies within the A,B,H antigen system or other carbohydrate antigen system.

L30 ANSWER 45 OF 67 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 90:50276 LIFESCI Full-text
TITLE: Complete purification and characterization of alpha -3-N-acetylgalactosaminyl-transferase encoded by the human blood group A gene.
AUTHOR: Takeya, A.; Hosomi, O.; Ishiura, M.
CORPORATE SOURCE: Dep. Legal Med., Gunma Univ. Sch. Med., Maebashi, Gunma 371, Japan
SOURCE: J. BIOCHEM., TOKYO., (1990) vol. 107, no. 3, pp. 360-368.
DOCUMENT TYPE: Journal
FILE SEGMENT: L
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Human alpha -3-acetylgalactosaminyl-transferase has been purified 27,000,000-fold from A sub(1) plasma by (NH sub(4)) sub(2)SO sub(4) fractionation and affinity chromatography on Sepharose 4B, anti-human group O plasma antibodies-Sepharose 4B, and Blue Dextran-Sephadex G-25. A modified procedure in the Sepharose 4B step was developed by batch adsorption and desorption experiments. The reaction velocity was found to fall off again at high concentrations of oligosaccharide acceptor substrates. The apparent K sub(i) values for UDP and UDP-galactose are 8.6 and 6.2 mu M, respectively. The pure enzyme also catalyzes the transfer of galactose in alpha -linkage to 2'-fucosyllactose though the transfer rate of galactose is much lower than that of N-acetylgalactosamine.

L30 ANSWER 46 OF 67 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 90:62898 LIFESCI Full-text

TITLE: Purification, properties and partial amino acid sequence of the blood-group-A-gene-associated alpha -3-N-acetylgalactosaminyl-transferase from human gut mucosal tissue.
AUTHOR: Navaratnam, N.; Findlay, J.B.C.; Keen, J.N.; Watkins, W.M.
CORPORATE SOURCE: Div. Immunochem. Genet., MRC Clin. Res. Cent., Watford Rd., Harrow, Middx. HA1 3UJ, UK
SOURCE: BIOCHEM. J., (1990) vol. 271, no. 1, pp. 93-98.
DOCUMENT TYPE: Journal
FILE SEGMENT: L
LANGUAGE: English
SUMMARY LANGUAGE: English
AB An alpha -3-N-acetylgalactosaminyl-transferase that transfers N-acetylgalactosamine from UDP-N-acetylgalactosamine to H-active structures to form A determinants was purified to homogeneity from human gut mucosal tissue of blood-group-A subjects. The mucosa was homogenized, then treated with Triton X-100, and the solubilized enzyme was purified by affinity chromatography on UDP-hexanolamine-agarose and octyl-Sepharose CL-4B. Enzyme activity was recovered in 44% yield with a specific activity of approx. 7 mu mol/min per mg. The only effective acceptor substrates for the transferase were those containing a subterminal beta -galactosyl residue substituted at the O-2 position with L-fucose. The purified enzyme had a weak capacity to transfer D-galactose from UDP-D-galactose to similar acceptors to make blood-group-B determinants. H.p.l.c. and SDS/PAGE analysis indicated an M sub(r) of 40,000 for the purified enzyme.

L30 ANSWER 47 OF 67 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 27
ACCESSION NUMBER: 1988:257077 SCISEARCH Full-text
THE GENUINE ARTICLE: N2340
TITLE: IMMUNOLOCALIZATION OF BLOOD GROUP-A GENE SPECIFIED ALPHA-1,3N-ACETYLGALACTOSAMINYL-TRANSFERASE AND BLOOD GROUP-A SUBSTANCE IN THE TRANS-TUBULAR NETWORK OF THE GOLGI-APPARATUS AND MUCUS OF INTESTINAL GOBLET CELLS
AUTHOR: ROTH J (Reprint); GREENWELL P; WATKINS W M
CORPORATE SOURCE: UNIV BASEL, BIOCTR, KLINGELBERGSTR 70, CH-4056 BASEL, SWITZERLAND (Reprint); CLIN RES CTR, MRC, DIV IMMUNOCHEM GENET, HARROW HA1 3UJ, MIDDX, ENGLAND
COUNTRY OF AUTHOR: SWITZERLAND; ENGLAND
SOURCE: EUROPEAN JOURNAL OF CELL BIOLOGY, (APR 1988) Vol. 46, No. 1, pp. 105-112.
ISSN: 0171-9335.
PUBLISHER: WISSENSCHAFTLICHE VERLAG MBH, BIRKENWALDSTRASSE 44, POSTFACH 10 10 61, 70009 STUTTGART, GERMANY.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 49
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994

L30 ANSWER 48 OF 67 MEDLINE on STN
ACCESSION NUMBER: 87102614 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 3100023
TITLE: Effect of retinoic acid and phorbol-12-myristate-13-acetate on glycosyltransferase activities in normal and transformed cells.
AUTHOR: Moskal J R; Lockney M W; Marvel C C; Trosko J E; Sweeley C C
CONTRACT NUMBER: AM 12434 (NIADDK)
SOURCE: Cancer research, (1987 Feb 1) 47 (3) 787-90.
Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198703
ENTRY DATE: Entered STN: 19900302
Last Updated on STN: 19980206
Entered Medline: 19870304

AB Retinoic acid was found to increase the activity of cytidine monophosphosialic acid:lactosylceramide sialyltransferase activity in a nontransformed clonal hamster cell line, NIL 8, and a virally transformed clone, NIL 8-HSV. The potent tumor promoter phorbol-12-myristate-13-acetate (PMA) had no significant effect on sialyltransferase activity in NIL 8 cells but stimulated this activity almost 6-fold when added to NIL 8-HSV cells. There was a synergistically additive effect on sialyltransferase activity when PMA was added to NIL 8 cells in concert with retinoic acid. On the other hand neither PMA nor retinoic acid had an appreciable effect on two other glycosyltransferases measured, uridine diphospho-N-acetylgalactosamine:globotriaosylceramide N- acetylgalactosaminyl-transferase and uridine diphosphogalactose:asialoagalactofetuin galactosyltransferase. Examination of sialyltransferase activity in a human epidermoid carcinoma cell line showed a large increase in enzyme activity in response to retinoic acid administration. Two nontransformed hamster cell lines had less basal sialyltransferase activity but also showed marked elevations after retinoic acid treatment. It is proposed that one of the molecular mechanisms underlying the biological effects of retinoic acid and PMA may be an increase in sialyltransferase activity. Possible regulatory mechanisms are discussed.

L30 ANSWER 49 OF 67 MEDLINE on STN DUPLICATE 28
ACCESSION NUMBER: 86033762 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 2414277
TITLE: Differing reactions of monoclonal anti-A antibodies with oligosaccharides related to blood group A.
AUTHOR: Gooi H C; Hounsell E F; Picard J K; Lowe A D; Voak D; Lennox E S; Feizi T
SOURCE: Journal of biological chemistry, (1985 Oct 25) 260 (24) 13218-24.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198511
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19900321
Entered Medline: 19851129

AB Inhibition radioimmunoassays with blood group A-related oligosaccharides have been used to investigate the specificities of six monoclonal anti-A antibodies, three of which had been intentionally generated by immunization of mice with blood group A erythrocytes and A-active blood group substance, and three were incidentally produced following immunization of mice with human tonsil cell membranes or a human colon cancer cell line. By hemagglutination, these antibodies are highly specific for human blood group A erythrocytes. However, they differ from one another in their reaction patterns with mono- and difucosyl A antigen structures and the corresponding afucosyl sequences on Type 1 and Type 2 backbone structures. The six antibodies, together with four previously characterized anti-A monoclonal antibodies (originally raised against the receptor for epidermal growth factor) have been classified into five groups. The first two groups consist of antibodies with broad specificities for A-related structures. There are five antibodies in the first group (TL5, 29.1, A17/3D1, MH2/6D4, and MH1/5D1) reacting to varying degrees with the mono- and difucosyl A antigen structures on either type of backbone sequence. In the second group are two antibodies (A15/3D4 and A15/3D3) which are difficult to inhibit with the oligosaccharides tested, but they reacted best with monofucosyl A structure on either type of backbone. Each of the remaining three antibodies had a distinct and more restricted reaction pattern, with a specificity for the difucosyl A antigen on both types of backbone (antibody EGR/G49) or the Type 1-based mono- and difucosyl A antigen structures (antibody MAS 016c) or the Type 2-based monofucosyl A antigen structure (antibody 455). The reactions of four of the antibodies with N-acetylgalactosamine or with oligosaccharides containing the afucosyl sequence GalNAc alpha 1-3Gal suggest that they may react with certain glycoconjugates with alpha-N-acetylgalactosaminyl termini ("A-like" structures) that are unrelated to the products of the blood group A gene-specified alpha-N- acetylgalactosaminyl-transferase. Knowledge of the differing reactions of these monoclonal antibodies is important for interpreting their reactions with glycoproteins and glycolipids of diverse origins.

L30 ANSWER 50 OF 67 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 84:36822 LIFESCI Full-text
TITLE: Genetically regulated expression of UDP-N-acetylgalactose amine: GM3(NeuGc)-N-acetylgalactosaminyl-transferase (EC 2.4.1.92) activity in mouse liver.
AUTHOR: Hashimoto, Y.; Abe, M.; Kiuchi, Y.; Suzuki, A.; Yamakawa,

T.
CORPORATE SOURCE: Metab. Sect., Tokyo Metrop. Inst. Med. Sci., Honkomagome, Bunkyo-ku, Tokyo 113, Japan
SOURCE: J. BIOCHEM., TOKYO., (1984) vol. 95, no. 6, pp. 1543-1549.
DOCUMENT TYPE: Journal
FILE SEGMENT: N; G; M
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The authors measured the activity of UDP-N-acetylgalactosamine: GM3(NeuGc)-N-acetylgalactosaminyl-transferase in the liver of mouse strains BALB/c, WHT/Ht, and progeny. The transferase activity in the microsomal fraction of BALB/c liver was 2.10 plus or minus 0.32 x 10 super(-5) units/mg protein (mean plus or minus S.D.); no activity was detected in WHT/Ht liver, F sub(1) hybrids between BALB/c and WHT/Ht expressed GMN)euGc) as well as the enzyme activity, the level half that of BALB/c liver. In the backcross generation of F sub(1) to WHT/Ht, 11 of the 21 mice analyzed expressed both GM2(NeuGc) and the transferase activity; the rest expressed neither. The results suggest that the expression of GM2(NeuGc) is directly regulated by the activity of UDP-N-acetylgalactosamine: GM3(NeuGc)-N-acetylgalactosaminyl- transferase in mouse liver.

L30 ANSWER 51 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 29
ACCESSION NUMBER: 1984:470016 CAPLUS Full-text
DOCUMENT NUMBER: 101:70016
TITLE: Biosynthesis of gangliosides in cultured retina from chick embryos
AUTHOR(S): Landa, Carlos A.; Panzetta, Pedro; Maccioni, Hugo J. F.
CORPORATE SOURCE: Fac. Cienc. Quim., Univ. Nac. Cordoba, Cordoba, 5016, Argent.
SOURCE: Developmental Brain Research (1984), 14(1), 83-92
CODEN: DBRRDB; ISSN: 0165-3806
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Retina tissue from 7-day chick embryos was maintained in culture for ≤10 days. After 5 days in culture the incorporation of [3H]leucine into proteins and of [3H]glucosamine into gangliosides was similar to that found in retinas from 12-day embryos. The incorporation of [3H]thymidine into DNA decreased steadily with time in culture; after 5 days it was .apprx.20% of the initial value and .apprx.2-fold that determined in retinas from 12-day embryos. The radioactivity pattern of gangliosides labeled with [3H]glucosamine showed a predominance of the label in disialosyllactosylceramide (GD3) up to the 3rd day of culture. From then on, there was a progressive increase in the labeling of disialosylgangliotetraosylceramide (GD1a); by day 7 of culture, labeling of GD1a predominated and the labeling pattern was indistinguishable from that found in retinas from 12-day-old embryos. The specific activities of the CMP-n-acetylneuraminate:GM3 sialosyl- and UDP-n-galactosamine:GM3 N- acetylgalactosaminyl- transferases decreased to 15% and increased to 400%, resp., of the values determined in the retinas of 7-day embryos. The cultured retinas progressed in their organization into layers with culture time. The labeling transition from GD3 to GD1a was also detected after inhibition of the histotypic organization by addition of 5-bromo 2-deoxyuridine to the culture medium. Apparently high activity of GM3:sialosyltransferase and high labeling of GD3 are associated with the proliferative state of retina cells, whereas high activity of GM3:N-acetylgalactosaminyltransferase and high labeling of GD1a are associated with the nonproliferative, differentiated state of these cells.

L30 ANSWER 52 OF 67 MEDLINE on STN
ACCESSION NUMBER: 84233460 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 6428707
TITLE: Biosynthesis of gangliosides in cultured retina from chick embryos.
AUTHOR: Landa C A; Panzetta P; Maccioni H J
SOURCE: Brain research, (1984 May) 316 (1) 83-92.
Journal code: 0045503. ISSN: 0006-8993.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198408
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19840823

AB Retina tissue from 7-day chick embryos was maintained in culture for up to 10 days. After 5 days in culture the incorporation of [3H]leucine into proteins and of [3H]glucosamine into gangliosides was similar to that found in retinas from 12-day embryos. The incorporation of [3H]thymidine into DNA decreased steadily with time in culture; after 5 days it was about 20% of the initial value and approximately twice that determined in retinas from 12-day embryos. The radioactivity pattern of gangliosides labeled with [3H]glucosamine showed a predominance of the label in disialosyllactosylceramide (GD3); up to the 3rd day of culture. From then on, there was a progressive increase in the labeling of disialosylgangliotetraosylceramide (GD1a); by day 7 of culture, labeling of GD1a predominated and the labeling pattern was indistinguishable from that found in retinas from 12-day-old embryos. The specific activities of the CMP-NeuAc:GM3 sialosyl- and UDP-GalNAc:GM3 N- acetylgalactosaminyl-transferases decreased to 15% and increased to 400%, respectively, of the values determined in the retinas of 7-day embryos. The cultured retinas progressed in their organization into layers with culture time. The labeling transition from GD3 to GD1a was also detected after inhibition of the histotypic organization by addition of 5-bromo 2-deoxyuridine to the culture medium. Results suggest that high activity of GM3:sialosyl transferase and high labeling of GD3 are associated with the proliferative state of retina cells, while high activity of GM3:N-acetylgalactosaminyltransferase and high labeling of GD1a are associated with the non-proliferative, differentiated state of these cells.

L30 ANSWER 53 OF 67 MEDLINE on STN
ACCESSION NUMBER: 84076997 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 6418000
TITLE: The existence of atypical blood group galactosyltransferase which causes an expression of A2 character in A1B red blood cells.
AUTHOR: Yoshida A
CONTRACT NUMBER: HL-29514 (NHLBI)
SOURCE: American journal of human genetics, (1983 Nov) 35 (6) 1117-25.
Journal code: 0370475. ISSN: 0002-9297.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198401
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19970203
Entered Medline: 19840107

AB It is generally accepted that the blood group subtypes A1 and A2 expressions are controlled by two different blood group N- acetylgalactosaminyl-transferases, that is, A1-enzyme and A2-enzyme, respectively, and that the two types of enzymes are governed by the allelic A1 and A2 genes. The observed frequencies of blood types in Caucasians are compatible to this model. However, the subtype A2 character is far more frequently observed in AB red cells than in A red cells in some black and Oriental populations. Two black blood samples with phenotype A2B contained A1-enzyme, but not A2-enzyme, and exhibited several times higher B-enzyme activity than control AB and B blood. The kinetic properties, that is, pH-activity profile and Km for UDP-Gal, of the B-enzyme from these two A2B subjects differed from that of control B-enzyme. In these two cases, therefore, the A2 character was not caused by the subactive A2-enzyme, but because of an insufficient formation of the A-substances in red cell membranes presumably caused by the competition between the A1-enzyme and the super active atypical B-enzyme at the common H-sites. The results suggest that the B gene can be subdivided into usual B1 and atypical B2, and that not only A2B subjects but also A1B2 subjects could express A2 character in their red cells. The B2 gene may be common in certain black and Oriental populations.

L30 ANSWER 54 OF 67 MEDLINE on STN
ACCESSION NUMBER: 83097517 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 6817633
TITLE: An enzyme basis for blood type A intermediate status.
AUTHOR: Yoshida A; Dave V; Branch D R; Yamaguchi H; Okubo Y
CONTRACT NUMBER: HL-15125 (NHLBI)
HL-20301 (NHLBI)
SOURCE: American journal of human genetics, (1982 Nov) 34 (6) 919-24.
Journal code: 0370475. ISSN: 0002-9297.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198302
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19970203
Entered Medline: 19830214

AB The blood type A is known to be subclassified as A1, A2, and A1-A2 intermediate (Aint), depending upon red cell agglutinability with anti-A1 and anti-H lectins. Approximately 80% of the blood group H-sites remained unglycosylated in type Aint erythrocyte membranes. Plasma from Aint individuals contains a special blood group GalNAc transferase (UDP-GalNAc:2'-fucosylgalactoside-alpha-3-N-acetylgalactosaminyl transferase), which is different from the enzyme in A1 plasma and the enzyme in A2 plasma. A1-enzyme has strong affinity to UDP-GalNAc and 2'-fucosyllactose, A2-enzyme has low affinity to both substrates, and Aint-enzyme has strong affinity to UDP-GalNAc and very low affinity to 2'-fucosyllactose, which is a soluble analog of the H-substances. The low degree of glycosylation of the blood group H-sites due to the low affinity of Aint-enzyme with the H-substances can account for the lower A activity and higher H activity in Aint red cells than in A1 red cells. The blood group A allele can be subdivided into three common alleles, A1, A2, and Aint, each controlling the formation of different types of blood group GalNAc transferases.

L30 ANSWER 55 OF 67 MEDLINE on STN DUPLICATE 30
ACCESSION NUMBER: 82138880 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 6174334
TITLE: Studies on blood-groups A1 and A2. Further evidence for the predominant influence of quantitative differences in the number of A antigenic sites present on A1 and A2 erythrocytes.
AUTHOR: Schenkel-Brunner H
SOURCE: European journal of biochemistry / FEBS, (1982 Mar 1) 122 (3) 511-4.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198205
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19820521

AB Blood-group O and A2 erythrocytes were treated with the A1-gene -dependent and A2-gene-dependent N-acetylgalactosaminyl transferases in the present of UDP-N-acetyl[14C]galactosamine. Although the transfer of N-acetyl[14C]galactosamine with A2 transferase was slower than with A1 enzyme, group O as well as A2 cells became agglutinable by anti-A1 reagents when incubated with both transferases. Fractionation of the labelled erythrocyte stroma into glycoprotein and glycolipid components showed an approximately equal distribution pattern of radioactivity in all experiments. Likewise, when the short-chain glycolipids and polyglycosylceramides isolated from the labelled stroma were further analyzed by thin-layer chromatography, no major differences were detected in the chromatographic profiles of O and A2 cells when treated with either transferase. These observations indicate that (a) the blood-group-H-type oligosaccharide chains of A2 cells may be similar to those of group-O cells and (b) the serological differences between A1 and A2 cells are likely to be due to a lower density of A-antigenic sites on A2 cells.

L30 ANSWER 56 OF 67 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1982:259459 BIOSIS Full-text
DOCUMENT NUMBER: PREV198274031939; BA74:31939
TITLE: A CASE OF WEAK BLOOD GROUP B EXPRESSION B-M ASSOCIATED WITH ABNORMAL BLOOD GROUP GALACTOSYL TRANSFERASE.
AUTHOR(S): YOSHIDA A [Reprint author]; YAMATO K; DAVE V; YAMAGUCHI H; OKUBO Y
CORPORATE SOURCE: DEP OF BIOCHEM GENETICS, CITY OF HOPE RES INST, DUARTE, CALIF 91010, USA
SOURCE: Blood, (1982) Vol. 59, No. 2, pp. 323-327.
CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Article
FILE SEGMENT: BA

LANGUAGE: ENGLISH

AB The mechanisms of unusually weak A and B blood group expressions are not well understood. Since the human blood group A and B substances are produced by the action of blood group GalNAc [N- acetylgalactosaminyl] transferase and Gal [galactosyl] transferase, respectively, the mechanism may be elucidated by examining the properties of the blood group transferases and membranes of the subjects with the abnormality. A case was examined associated with very weak B activity in red blood cells, an absence of the B agglutinin in serum, and an existence of the H and B substances in saliva, a case commonly classified as Bm. More than 85% of the H sites remained unglycosylated in the subject's red cell membranes. The blood group Gal transferase activity in the subject's plasma and red cell membranes was about 50% of that of normal. The pH-activity profile and the Km for UDP-Gal and 2'-fucosyllactose of the subject's enzyme were distinctively different from that of normal enzyme. The weak B activity in the present Bm case was due to a direct mutation in B gene resulting in formation of variant B enzyme with low affinity to UDP-Gal and insufficient galactosylation of H sites in the subject.

L30 ANSWER 57 OF 67 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1982:222962 BIOSIS Full-text
DOCUMENT NUMBER: PREV198273082946; BA73:82946
TITLE: AN UNUSUAL CASE OF BLOOD GROUP ABO INHERITANCE O FROM AB X O.
AUTHOR(S): OKA Y [Reprint author]; NIIKAWA N; YOSHIDA A; MATSUMOTO H
CORPORATE SOURCE: DEP OF PEDIATRICS, HOKKAIDO UNIV, SCH OF MED, SAPPORO, JAPAN
SOURCE: American Journal of Human Genetics, (1982) Vol. 34, No. 1, pp. 134-141.
CODEN: AJHGAG. ISSN: 0002-9297.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB An unusual blood group inheritance, i.e., a phenotype O child from AB + O parents, was found in a Japanese family. Since 2 other children from the parents are blood type B, this is not a case of Cis-AB inheritance. The mother is not blood A/B chimera, and normal levels of blood group N-acetylgalactosaminyltransferase (A-enzyme) and galactosyltransferase (B-enzyme) were detected in her plasma. The mother is genetically true AB heterozygous. The 2 sons with phenotype B had normal levels of plasma B-enzyme, but had no A-enzyme, and the father and the daughter with phenotype O had neither A- nor B-enzyme in their plasma. The analyses of 24 genetic marker systems indicated that the O daughter was a true child of the parents. The affirmative probability of parentage on the O daughter was calculated to be 0.9999999917 by Bayes' theorem. The genotype of the O daughter was not the usual OO; this rare O expression might be due to a new structural mutation or a deletion in either maternal A or B gene during oogenesis.

L30 ANSWER 58 OF 67 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 80251018 EMBASE Full-text
DOCUMENT NUMBER: 1980251018
TITLE: [Enzymatic investigations on the basis of the subgroups A1 and A2].
ENZYMATISCHE UNTERSUCHUNGEN ZUR ENTSTEHUNG DER UNTERGRUPPEN A1 UND A2.
AUTHOR: Schenkel-Brunner H.
CORPORATE SOURCE: Inst. Biochem., Univ. A-1090 Wien, Austria
SOURCE: Wiener Klinische Wochenschrift, (1980) Vol. 92, No. Suppl. 120-121, pp. 749-751. .
CODEN: WKWOAO
COUNTRY: Austria
DOCUMENT TYPE: Journal
FILE SEGMENT: 025 Hematology
029 Clinical Biochemistry
LANGUAGE: German
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 911209
Last Updated on STN: 911209

AB Human O and A2 erythrocytes were incubated with the α-N-acetyl- galactosaminyl transferases isolated from the plasma of A1 and A2 individuals in the presence of labeled UDP-N-acetylgalactosamine. It could be shown that both O and A2 cells could be agglutinated by anti-A1 reagent when treated with the A2 transferase. Furthermore, the

incorporated radioactivity was about equal for both cell types, corresponding to about 600,000 A sites newly formed; this number, however, is considerably higher than that found in native A2 cells (i.e., about 260,000). The results presented thus provide good evidence that the development of the subgroups A1 and A2 is based mainly on differences in enzyme kinetics of the A1 and A2 gene-dependent N- acetylgalactosaminyl transferases, rather than on variations in their substrate specificities.

L30 ANSWER 59 OF 67 MEDLINE on STN DUPLICATE 31
ACCESSION NUMBER: 80156827 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 6153982
TITLE: Blood-group-ABH antigens of human erythrocytes. Quantitative studies on the distribution of H antigenic sites among different classes of membrane components.
AUTHOR: Schenkel-Brunner H
SOURCE: European journal of biochemistry / FEBS, (1980 Mar) 104 (2) 529-34.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198006
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19800627

AB The contribution of blood-group-active glycolipids and glycoproteins to the blood-group-ABH character of human erythrocytes was investigated. For that purpose the blood-group-H sites of human O cells were converted in vitro into group-A sites by transfer of alpha-N-acetyl-D- [14C]galactosamine residues with the aid of the blood-group-A gene -dependent alpha-N-acetylgalactosaminyl transferase prepared from human A1 plasma. Upon partition of the red cell membranes between water and organic solvent, about 5% of the label was found in the organic phase and about 20% in the water phase, thus reflecting the distribution of blood-group antigenic sites between glycosphingolipids with short carbohydrate chains and polyglycosylceramides, respectively. The fact that about 70% of the radioactivity remained tightly bound to the membranes and could only be released by treatment with pronase provided good evidence that the bulk of blood-group-H determinants is bound to glycoprotein material. Following these results it can thus be assumed that blood-group-ABH activity of human erythrocytes is determined preferentially by group-specific glycoproteins rather than glycolipids.

L30 ANSWER 60 OF 67 MEDLINE on STN DUPLICATE 32
ACCESSION NUMBER: 81057824 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 6776690
TITLE: Blood group ABH antigens on human cord red cells. Number of H antigenic sites and their distribution among different classes of membrane constituents.
AUTHOR: Schenkel-Brunner H
SOURCE: Vox sanguinis, (1980 Jun) 38 (6) 310-4.
Journal code: 0413606. ISSN: 0042-9007.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198101
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19900316
Entered Medline: 19810129

AB When the blood group H sites of cord erythrocytes obtained from newborn infants of groups O, A, B and AB were labelled specifically by incubation of the whole cells with the A1 gene dependent alpha-N- acetylgalactosaminyl transferase in the presence of UDP-N-acetyl [14C]-galactosamine, the incorporation of radioactivity was considerably lower than that found for cells from adults. Based on the amount of label recovered in the membranes, average values of 326,000 H sites per single O cell and 68,000 H sites per single A, B and AB cell were calculated. Following fractionation of the stromal blood group substances thus labelled, it was found that, on the average, 66% of the radioactivity was bound to glycoprotein material, 2.7% to glycosphingolipids with short carbohydrate chains, and about 24% to polyglycosylceramides. As these values are similar to those previously determined for O cells from adults, this result shows that there are probably no substantial differences between erythrocytes from adults and newborn infants concerning

the overall membrane disposition, but rather provides evidence for variations in the carbohydrate chains of the stromal glycoconjugates.

L30 ANSWER 61 OF 67 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1980:258302 BIOSIS Full-text
DOCUMENT NUMBER: PREV198070050798; BA70:50798
TITLE: A GENETIC MODEL FOR THE INHERITANCE OF THE P P-1 AND P-K ANTIGENS.
AUTHOR(S): GRAHAM H A [Reprint author]; WILLIAMS A N
CORPORATE SOURCE: BLOOD BANK RES GROUP, ORTHO DIAGN INC, RARITAN, NJ 08869, USA
SOURCE: Immunological Communications, (1980) Vol. 9, No. 2, pp. 191-202.
CODEN: IMLCAV. ISSN: 0090-0877.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB A new genetic model of the P blood group system is presented. The system is controlled by 2 chromosomal loci. The 1st locus has 3 allelic genes. The p1k gene codes for an α-galactosyl- transferase that converts ceramide dihexoside to ceramide trihexoside (or the p1k antigen). The 2nd allele, the p1k gene, codes for an α-galactosyltransferase that converts both ceramide dihexoside to ceramide trihexoside (or the pk antigen) and paragloboside to the P1 antigen. The 3rd allele does not produce an active product. The 2nd locus has 2 allelic genes. The P2 gene codes for a β-N-acetylgalactosaminyl transferase that converts ceramide trihexoside to globoside (or the P antigen). The 2nd allele does not produce an active product. The predictions of the model are in agreement with family studies and fibroblast fusion studies. The current model and previous genetic models predict different possible phenotypes from rare P2 + p or pk2k + p matings or fibroblast fusions.

L30 ANSWER 62 OF 67 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1980:78797 BIOSIS Full-text
DOCUMENT NUMBER: PREV198019016295; BR19:16295
TITLE: GLYCO LIPID N ACETYLGALACTOSAMINYL TRANSFERASE ACTIVITY IN NORMAL AND KIRSTEN MURINE SARCOMA VIRUS TRANSFORMED BALB-C 3T3 CELLS.
AUTHOR(S): LOCKNEY M W [Reprint author]
CORPORATE SOURCE: DEP BIOCHEM, MICH STATE UNIV, EAST LANSING, MICH 48824, USA
SOURCE: Federation Proceedings, (1980) Vol. 39, No. 6, pp. ABSTRACT 3047.
Meeting Info.: 71ST ANNUAL MEETING OF THE AM. SOC. BIOL. CHEM. HELD WITH THE BIOPHYS. SOC., NEW ORLEANS, LA., USA, JUNE 1-6, 1980. FED PROC.
CODEN: FEPRA7. ISSN: 0014-9446.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH

L30 ANSWER 63 OF 67 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 78285202 EMBASE Full-text
DOCUMENT NUMBER: 1978285202
TITLE: Blood group gene specified glycosyltransferases in rare ABO groups and in leukaemia.
AUTHOR: Watkins W.M.
CORPORATE SOURCE: MRC Clin. Res. Cent., Northwick Park Hosp., Harrow, United Kingdom
SOURCE: Revue Francaise de Transfusion et Immuno-Hematologie, (1978) Vol. 21, No. 1, pp. 201-228. .
CODEN: RFTID6
COUNTRY: France
DOCUMENT TYPE: Journal
FILE SEGMENT: 025 Hematology
016 Cancer
LANGUAGE: English
SUMMARY LANGUAGE: French

AB Recent studies of the 2-α-L-fucosyltransferase level of the sera of individuals of different ABO groups have shown that the average level is higher in A1, A2 and A2B subjects than in the other groups. No 2-α-L-FT activity was found in over 20 samples from subjects of phenotype 'Bombay' (Oh). This enzyme was also absent from the sera of two subjects of the 'para-Bombay' phenotype. The red cells of these two persons contained no H substance and only very little A substance, although substances A and H were secreted in their saliva. Their sera contained a normal level of type A1 transferase. These findings lead to the conclusion that in this phenotype, an independent regulator controls the expression of gene H at cellular level. The absence of type H serum transferase in 'para-Bombay' subjects proves that the 2-α-L-FT normally encountered in serum originates mainly from the hemopoietic tissue and not from the tissues that synthetise the secreted blood group substances. A normal 2-α-L-FT level was found in the serum of a B(H/m) subject whose red cells contained H but almost no B although both substances B and H were present in the saliva. The galactosyl transferase level was approx. 70% of that of controls. This is the maximum that may be expected if all transferase originates from tissues other than hemopoietic tissue. Apparently, therefore, this phenotype is dependent on the action of a regulator gene that modifies the expression of the B gene in the cell producing this antigen. Study of the levels of A and H transferase in the plasma of 7 group A3 donors gave nonhomogeneous results. Two sera had a very weak α-N-acetylgalactosaminyl transferase activity which showed more uptake at pH 8 than at pH 6 which therefore resembled type A2 transferase. Two others had more transferase activity at pH 6 than at pH 8. One of the samples, submitted to electric focusing, had an iso-electric point at pH 9.6 and accordingly resembled a type A1 transferase (pH and pI). Gene H codes for a 2-α-L-FT activity demonstrable in all plasmas of A3 subjects, but the average level is less than in A1 and A2 subjects. Only one of the five samples of Ax subjects had a demonstrable A transferase activity; no activity was found in A4 and Ae1 subjects. The transferase H level of these samples was even lower than that of group A subjects. Study of transferase A and B in the sera of three members of a family with a Cis AB phenotype showed that the transferase A level was only slightly lower than normal, but that B transferase activity was much decreased. A transferase has an optimal pH at 6 and accordingly behaves as a type A1 transferase, but it has a stronger capacity of linking with UDP galactose than A transferase of normal A1, A2 and A1B subjects. Assay of H transferase activity in patients with acute leukemia showed a low level of this enzyme in untreated patients; during clinical remissions, the level returns to normal; during relapse, it decreases rapidly again. In one group A patient, A transferase activity behaved similarly, but the differences were less pronounced than for H transferase.

L30 ANSWER 64 OF 67 MEDLINE on STN
ACCESSION NUMBER: 75142319 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 1121806
TITLE: Assay of alpha-N-acetylgalactosaminyltransferases in human sera. Further evidence for several types of Am individuals.
AUTHOR: Cartron J P; Gerbal A; Badet J; Ropars C; Salmon C
SOURCE: Vox sanguinis, (1975) 28 (5) 347-65.
Journal code: 0413606. ISSN: 0042-9007.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197506
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19750620

AB The study of the alpha-N-acetylgalactosaminyltransferase in the sera of 19 individuals belonging to the rare Am blood group makes it possible to confirm the heterogeneity of this phenotype established on genetical and immunological criteria. Two groups of subjects, Am and Ay, can be distinguished. For the individuals of the first group, named Am, 15 samples (7 families) have been studied, the phenotype is inherited as an allele at the ABO locus. 14 of these subjects, have an alpha-N-acetylgalactosaminyltransferase whose kinetic properties were similar to those of A1 subjects. In one family, however, the A transferase detected is of the A1 type. On a quantitative level, the enzyme activities of these sera only reached 30-50 percent of the average value observed for A1 or A2 subjects, respectively. These facts suggest the existence of a genetic inhibitor, possibly linked to the ABO locus, preventing either an A1 or A2 gene from acting at the level of some cellular lines and leading therefore to the recognition of phenotypes named A-m-A1 and A-m-A2. On the contrary, under the experimental conditions used, no alpha-N-acetylgalactosaminyl- transferase activity was detected among the four individuals of the second group, named A-y by Weiner et al. (37), and whose appeareance in siblings results from the action of a recessive modifying y-A gene.

L30 ANSWER 65 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1973:513686 CAPLUS Full-text
DOCUMENT NUMBER: 79:113686
TITLE: Ganglioside patterns and phenotypic characteristics in a normal variant and a transformed back variant of a simian virus 40-induced hamster tumor cell line
AUTHOR(S): Nigam, Vijai N.; Lallier, R.; Brailovsky, C.
CORPORATE SOURCE: Dep. Cell Biol., Univ. Sherbrooke, Sherbrooke, QC, Can.
SOURCE: Journal of Cell Biology (1973), 58(2), 307-16
CODEN: JCLBA3; ISSN: 0021-9525
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ganglioside patterns of a cloned Simian virus 40 (SV40)-induced hamster tumor cell (Cl2TSV5-S), its normal variant (Cl2TSV5-R), which are Cl2TSV5-S gradually adapted to grow in the presence of 2 μg/ml actinomycin D and exhibit certain normal phenotypic characteristics, and its back variant (Cl2TSV5-RR), which are Cl2TSV5-R cells grown in the absence of actinomycin D for >60 passages and which exhibit greater phenotypic similarity to Cl2TSV5-S cells, were analyzed. All 3 cell lines contain N-(acetylnuraminyl)galactosylglycosyl ceramide (hematoside, GM3), N-acetylgalactosaminyl(N-acetylneuraminyl)galactosylglucosyl ceramide (GM2), and a higher ganglioside tentatively identified as disialohematoside. However, Cl2TSV5-R have more GM2 than Cl2TSV5-S whereas ClTSV5-RR contain an intermediate amount of GM2. The amount of GM2 is correlated with the activity of UDP-N-acetylgalactosamine:hematoside N- acetylgalactosaminyl transferase in the extract of the 3 cell lines and with their agglutination by wheat germ agglutinin.

L30 ANSWER 66 OF 67 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1973:56051 CAPLUS Full-text
DOCUMENT NUMBER: 78:56051
TITLE: Membrane components and enzymes in virally transformed cells
AUTHOR(S): Brady, Roscoe O.; Fishman, Peter H.; Mora, Peter T.
CORPORATE SOURCE: Natl. Inst. Neurol. Dis. Strokes, Natl. Inst. Health, Bethesda, MD, USA
SOURCE: Federation Proceedings (1973), 32(1), 102-8
CODEN: FEPRA7; ISSN: 0014-9446
DOCUMENT TYPE: Journal
LANGUAGE: English
AB There is a decrease of higher ganglioside homologs and activity of uridine diphosphate N-acetylgalactosamine: hematoside N- acetylgalactosaminyl-transferase in mouse cell lines after transformation with simian virus 40 (SV40) or polyoma virus. These changes are reversibly coupled to the changes in growth properties in tissue culture. In the flat revertant derivs. of the virus-transformed cell lines there is a trend to restoration of the ganglioside pattern and in enzymic activity to that of the parent cell line, in spite of the continued presence of the viral DNA. Cells infected with virus do not show the decrease in amino sugar transferase activity. Cocultivation of transformed cells with enzymically active cells did not result in reduced enzyme activity in the control cells, or in the restoration of enzyme activity in virally transformed cells. Similarly, no change in enzyme activity occurred when admixing homogenates of the reciprocal cells. These findings are consistent with a similar repressor mechanism in both SV40 and polyoma virus-induced cell transformation. Recent studies indicate similar alterations of ganglioside pattern and synthesis in RNA virus-transformed cells.

L30 ANSWER 67 OF 67 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1973:27251 BIOSIS Full-text
DOCUMENT NUMBER: PREV197309027251; BR09:27251
TITLE: THE ENZYMIC PRODUCTS OF THE HUMAN A AND B BLOOD GROUP GENES IN THE SERUM OF BOMBAY O-H DONORS.
AUTHOR(S): RACE C; WATKINS W M
SOURCE: Febs Letters, (1972) Vol. 27, No. 1, pp. 125-130.
CODEN: FEBLAL. ISSN: 0014-5793.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

```
=> log y
```